

MEDICAL RECORD



JOHN MORGAN (1735-1789)
Director General, Medical Department, U. S. Army, in 1755
Symposium on War Medicine, page 93



February 1944

Vol. 157, No. 2

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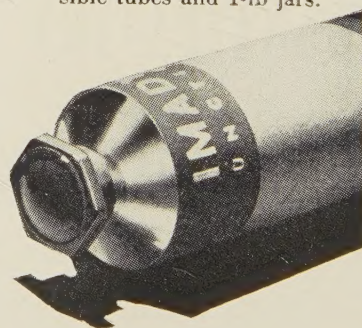




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Mental Health for All

The National Committee for Mental Hygiene advocates earlier discovery and prevention of mental disorders, more mental hygiene in formal and popular education, guidance in choosing life work, early discovery and treatment of emotional conflicts and behavior disorders of children; also more psychiatrists, and more funds for research and dissemination of knowledge already gained.

Dr. Nolan D. C. Lewis, professor of psychiatry at Columbia University, spoke on "Perspectives on Mental Hygiene of Tomorrow" at the annual luncheon of the National Committee for Mental Hygiene, November 11th. His speech contained many valuable ideas, best summed up in his warning of psychological "public enemies".

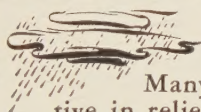
"It was intelligence and not brute force" said Dr. Lewis, "that enabled primitive man to overcome the great beasts of prey and other forces of nature. With man's steadily increasing control over the forces of nature there has been no similar gain in controlling or intelligently directing human nature. In addition to widespread interpersonal and international disturbances there are affecting the person abnormal fears, boredom, worry, indecision, the sense of inferiority and oversensitivity which are greater "public enemies" than the gangsters and racketeers."

Dr. Lewis pointed out the complexity of the problem of mental disorders, not only as affecting the individual, where one approach is needed, but also as affecting society where the social pathologist must understand the problems of psychopathological individuals only as a small part, and a not particularly analogous part of the complex known as "society".

"Science", Dr. Lewis continued, "is the most progres-

sive factor in culture, and our best hope of bettering conditions on this earth. Research, intelligence, and long term thinking are needed now as never before . . . Psychiatry is young as a science and still has far to go but through its aid a program can be foreseen under which by early and consistent training the individual can be educated to gain an understanding of himself and of the world about him, and particularly his relationship to that world. This will give the individual the foundation to appreciate values, and prepare him to meet without panic and without prejudice various problems as they arise, and thus to live with some satisfaction in the present world."

He closed with the following recommendations: 1. The best possible intensive study with individual treatment of patients should be the psychiatrist's first duty. 2. Some of the procedures of campaigns such as those developed so successfully in the fight for early recognition and control of tuberculosis may be studied with advantage. 3. There should be widespread, but thoroughly sound, dissemination of the knowledge we already possess on the origin and nature of mental conditions and on the modes of attack and prevention. 4. Young minds in particular are urgently needed in the work. Better teaching of psychiatry in the medical schools and the production of larger number of trained psychiatrists are essential. 5. Some means must be devised for guiding the individual in the selection of the life work for which he is best adapted, to guard him from frustration and enable him to develop his latent possibilities. 6. The early recognition and therapy of emotional conflicts and behavior disorders in children by pediatricians alert to the possibilities should accomplish a great deal towards averting emotional disturbances later in life and thus make a major contribution to mental health.



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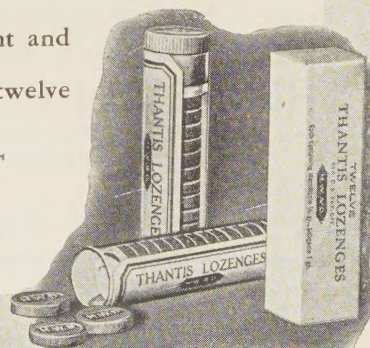
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LET'S ALL BACK THE ATTACK

Open Forum

Venereal Disease Public Educational Program and the Public Health Agencies*

HERMAN GOODMAN
New York, N. Y.

Efforts to transmit information to the public concerning matters of health must be based on the broadest concept. It is difficult, if not impossible, to expect acceptance of information given solely on venereal diseases, syphilis and gonorrhea. Contrariwise, it is possible to have acceptance of the same information on the same topic, namely venereal diseases, syphilis and gonorrhea, if these are part and parcel of a similar effort on tuberculosis, pneumonia, the common cold, and other communicable diseases. The formula should be the same. The type of message should be the same. The mode of approach should be the same. The pathways of information should be the same. The sponsors should be the same.

The venereal diseases, syphilis and gonorrhea, under this broad concept may secure no more than ten or fifteen percent of concentrated effort for transfer of helpful information. However, this fifteen percent is much better than total failure.

At this time, for example, it is practically impossible to secure the cooperation of powerful groups on the effort to transfer information solely on the prevention of venereal diseases, syphilis and gonorrhea. In a large east coast metropolis it has been impossible to place a message regarding venereal diseases in the transportation system—subway, bus, and elevated lines. If this same message regarding prevention of venereal diseases—syphilis and gonorrhea—were one of the series, similarly constructed, worded, and colored, no opposition would be raised. True enough, only one car card in seven would have the message regarding prevention of venereal disease—syphilis and gonorrhea. To repeat, one in seven is better than none at all.

An outline is presented herewith of a project for the transfer of information on that section of health information devoted to and stressing the problems of prevention of venereal disease—syphilis and gonorrhea.

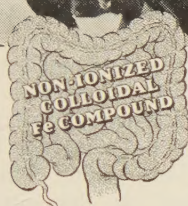
The time has come to revise the approach to the public of communicable disease control stressing reduction of syphilis and gonorrhea. Under the general slogan "Good Health is Your Contribution to Victory", emphasis on venereal disease control must now be directed to the preservation of the good health of the uninfected ninety-five percent of the men, women and children of the United States. The public must now be addressed with a message on the benefits of retaining good health and given explanations of the means of preventing certain infectious diseases—namely, venereal diseases—syphilis and gonorrhea. At the same time, the infected five percent must be controlled by treatment.

The government of the United States has in the past and is at present calling upon industry to publicize certain procedures. The food industry has accepted the re-

*Prepared at the request of and in cooperation with Murray Brees Associates, Advertising Counsel.

The opinions expressed herein are those of the author and it is to be understood he does not presume to give the official views of any branch of the federal, state or city governments.

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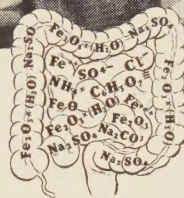


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sponsibility of keeping the public informed regarding food, food rationing, food production, food preservation. Banks, the banking industry and the association of insurance companies have accepted the responsibility of keeping the public informed as to the need for the purchase of war bonds and to subscribe part of their payroll regularly to war bond purchases.

The official public health agency is the logical organization to answer the call of the government to publicize protection of the reservoir of healthy persons. The official public health agency has cordial relations with the producers of pharmaceuticals, the research scientists of commerce and industry, physicians in practice, clinics and hospitals, dispensing pharmacists, and the public. The health agency, considered in its largest sense, can and will cooperate in keeping men of the home and fighting fronts free of the catching diseases—syphilis and gonorrhea.

The government has a call upon the health agency because cases of venereal diseases—syphilis and gonorrhea—have been on the increase, especially among youth. The public health agency recognizes that prevention is better than cure and it can accept the responsibility of informing the entire community of the dangers to the individual and to the nation of venereal diseases. Under the division of importance of avoidance of exposure is the prevention of these by chemical prophylaxis and the part pharmaceuticals, physicians and pharmacists have in their respective fields of preparation of effective chemicals, diagnosis and treatment. At the moment emphasis must be placed upon prevention.

The pathways of information and the prevention of venereal diseases—syphilis and gonorrhea—to the un-

infected ninety-five percent will be as follows: The physicians in their offices, the proprietors of the pharmaceutical houses, pharmacists in their stores, will assume the responsibility of informing their own personnel regarding these diseases.

By way of summary, the following facts concerning syphilis in industry are stressed:

1. Representatives of management and labor are co-operating in many sections of the country and in a few industries in venereal disease education by lectures, and the distribution of printed information in pay envelopes. Your local city or state health department is prepared to assist and cooperate with you in similar effort in your work or home community.

2. Management and labor benefit by finding cases of syphilis and arranging for proper treatment. Costly labor turnover is reduced.

3. In most instances an employee under treatment for syphilis may continue on his job.

4. The patient under effective medical treatment is not a menace to his family and fellow workers. Syphilis is spread from person to person only by untreated early cases.

5. Modern medical treatment renders the patient noninfectious in a short time.

6. Persons found infected must submit to prescribed medical treatment to preserve themselves and their families from illness in later life, unhappiness, and lost time from work.

Having begun in their own establishments, further efforts will be made to inform parents regarding the facts to be given to their progeny. Pedagogues will be given approved educational techniques for dissemination of information for their pupils. The occupants of the pulpits, the churches, the denominations in our

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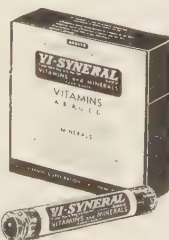
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community will be offered messages approved by their own individual leaders for their parishioners.

Organized publicists will be given information regarding the advances in research and techniques for their public. The pharmaceutical producers will be advised and encouraged in the line of pharmacal therapeutics required in this effort to free our community of syphilis and gonorrhea. The relation of physician to patient will be outlined.

The place that the pharmacy has in dispensing the prescription of the physician will be explained to the public. The protective social measures available to local, state and federal departments for the apprehension, retention, treatment and rehabilitation of the professional prostitute will form the basis of community action.

The official health agency will address a message to Mr. and Mrs. United States. In plain language, understood by all, questions will be answered—questions which are uppermost in minds of parents and prospective parents: Do you know what venereal diseases—syphilis and gonorrhea—are? Do you know how they are spread? What would you advise anybody to do who thought he or she was infected? What should you tell your son or daughter about venereal diseases and the prevention of venereal diseases? Has your church sponsored a social hygiene or venereal disease prevention Sunday? What should the school teach about the catching venereal diseases, syphilis and gonorrhea?

The public health agency and its allies, the pharmaceutical industry and cosmetic production fields, will undertake to address the youth of fifteen to nineteen. New, infectious phases of venereal disease—syphilis

and gonorrhea—present a pressing problem for youth. The statistics of the war years for the United States indicate doubling of the new infection rate. The reasons and the remedy through home, school, church and community action will be indicated in the special appeals for the preservation of health of youth.

In response to the appeal of our government, the health agency will undertake to tell the people what they need to know about the venereal diseases. The rôle of the healthy individual will be explained. The phases of this information are: Venereal diseases are catching, prevalent, avoidable and preventable through early or prophylactic treatment. The rôle of the venereally diseased person requires explanations in the phases: Venereal diseases are detectable, curable, and cure can be determined by a licensed physician. The rôle of the community includes the phases: Find the case, treat the case, seek and control those from whom the disease has been acquired, and those to whom the disease may have been transmitted. Last but not most important in the rôle of the community is education—to learn and to teach.

It is probably unnecessary to mention that the learned professions of pharmaceutical research and production, the physicians and pharmacists, have always been proud of their contributions toward the diminishing need for their services, the treatment of the sick, through increased provision for prevention of disease among the healthy. The venereal diseases offer a unique opportunity for prevention by avoidance of exposure of the healthy to diseased persons, by prevention after unavoidable exposure through chemicals, by the detection and treatment of the diseased persons.

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The health agency may take advantage of the appeal of the government by announcing its policy toward the noninfectious, noncatching venereally diseased employee and prospective employee. The declared policy of the public health agency, as an example to all other industry, is to be based on the platform: No discrimination is practised on employees or prospective employees because they show evidence of venereal disease on laboratory tests but are otherwise physically fit for the employment they have or seek. Now is the time to accept the appeal of the government. The more done today, the less there is to be done when peace comes. Each dollar spent now in preventing venereal disease infection saves a thousand dollars in the future care of the infected and his family, not to speak of the preservation of man and woman power, and the health of children yet unborn. Ninety-five percent of the effort should be directed to the ninety-five percent of the uninfected. Attention must be directed to the infected five percent. Since many persons may be infected without knowing it, and the discovery or detection requires periodical examination by licensed physicians, diagnostic and treatment facilities must be available to all without regard to financial ability to pay, without regard to race, color or citizenship.

Every effort must be made to convince the person infected with syphilis and gonorrhea to seek treatment from a physician, at a hospital, or clinic. Follow-up social service should be explained. The ignorant, the criminal, the malicious, the professional disseminator and reservoir of infectious venereal disease—syphilis and gonorrhea—namely the prostitute, must be controlled by repressive police action and enforced public

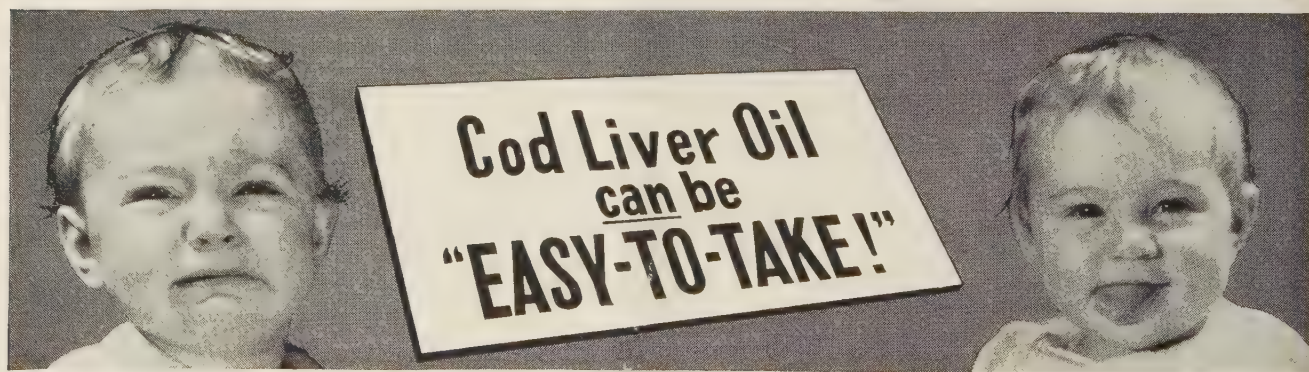
health, confining, disinfecting, treatment centers and protective social measures for rehabilitation.

Pharmaceutical research is an obligation of the industry. One needs but mention specific hit-the-target chemicals—arsphenamine, salvarsan, 606—so valuable in syphilis; sulfonamides, the miracle sulfa remedies of value in gonorrhea; of penicillin, soon to be generally available, but of tremendous promise in experimental therapeutics. These and others are the fruits of the activities of the pharmaceutical industry.

The part of the physician will be explained to the uninfected public. He gives information on venereal disease and its prevention, he administers or supervises the administration of chemical prophylaxis or chemical early treatment. The physician diagnoses, he treats, and determines cure. The official health agency can instruct the public in the selection of a physician through a call upon the local health department or the medical society if there is no family medical advisor in the community where they have recently arrived or where they have come to seek employment. The injunction to avoid quacks may be given by the health agency.

The part the pharmacist plays may be explained. In venereal disease control, a pharmacist distributes official health department literature. He dispenses exactly as the physician prescribes. He stocks and sells fresh standard merchandise. The pharmacist does not diagnose, does not treat, does not sell quack medicines for self-treatment, because he knows self-treatment implies self-diagnosis; because he knows self-diagnosis, self-treatment and self-determination of cure are foolish.

(To be continued)



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Our Contributors

MAX EINHORN, M.D., New York, N.Y., is one of the leading gastroenterologists of America; his work is also well known in Europe. He has written many important books on diseases of the stomach and the intestines, and has invented a number of instruments which are used in the practice of gastroenterology.

* * *

ISRAEL BRAM, M.D., Philadelphia, Pa., has devoted nearly thirty years exclusively to clinical research on goiter and endocrinology. He is the author of four books on goiter and the thyroid and has contributed over one hundred and fifty articles to medical journals on disorders of the ductless glands. Dr. Bram has taught at the Medico-Chirurgical College, and more recently at the Jefferson Medical College. His hobbies are Shakespeare, philosophy and the musical classics.

* * *

FRANK S. CAPRIO, B.A., M.D., Washington, D. C., obtained his academic degree at the University of Pennsylvania in 1927 and his degree in medicine from George Washington University Medical School in 1931. He served a year's internship at the Jersey City Medical Center, Jersey City, N. J. His postgraduate work includes a medicomilitary training course at the Mayo Clinic; a course in neuropsychiatry at the Veterans Hospital, Palo Alto, Calif.; a course in psychiatry and psychoanalysis in Vienna and at the Psychiatric Institute, New York, and other psychoanalytical work. He was a member of the medical staff of the Walter Reed Hospital, 1932-1933, served in the Civilian Conservation Corps Camps, 1933-1935, and was staff psy-

chiatrist at various Veterans Hospitals. He was inducted into the U. S. Army in 1941, being assigned to duty at the Walter Reed Hospital, Washington, D. C., and retired for physical disability in March 1942. He is the author of two books and a number of medical articles dealing principally with occupational therapy and psychiatry. His hobbies are music, sculpture and drawing.

* * *

B. LIBER, B.A., B.S., M.D., Dr.P.H., New York, N. Y., was born in Rumania and educated in France. He received his degree in medicine in Vienna in 1904 and his degree of Doctor of Public Health in the United States in 1919. He is at present adjunct professor of psychiatry at the New York Polyclinic Medical School and Hospital and director of the Mental Hygiene Clinic of Polyclinic Hospital. He is an artist and a painter, and his hobby is working in his garden.

* * *

ALFRED KOERNER, M.D., LL.B., LL.M., New York, N. Y., was graduated in medicine from the Medical College of Virginia, Richmond, in 1928, and in 1937 obtained his LL.B. degree from St. Johns University and his LL.M. the following year from the same institution. He is executive secretary of the National Research Foundation for the Eugenic Alleviation of Sterility, Inc., and president of the Division for Education in Heredity and Eugenics. He is a frequent contributor to numerous professional journals and publications on subjects relating to the diagnosis and treatment of sterility, as well as the consideration of eugenic principles in the aid of the infertile. His hobbies consist of outdoor sports, chess, cards, music and the drama.

(Continued on page 84)

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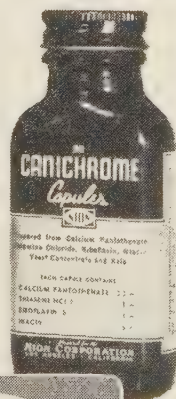
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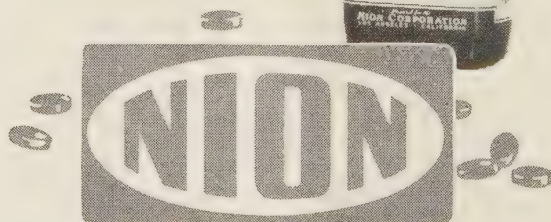
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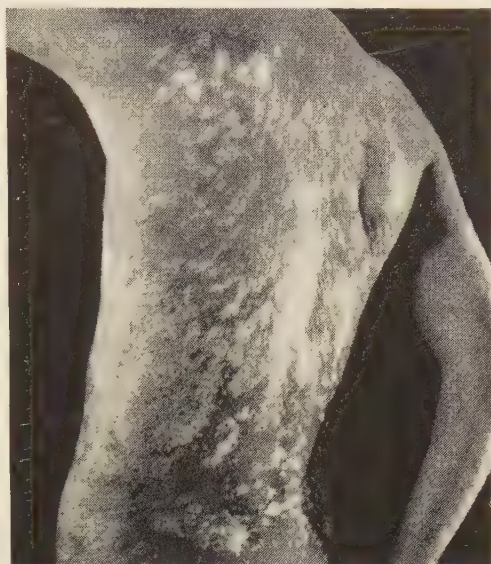


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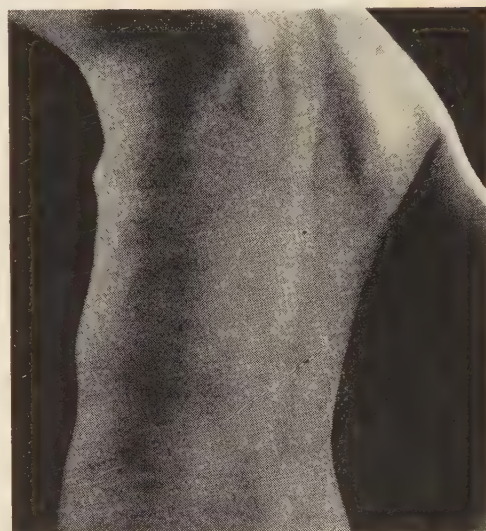
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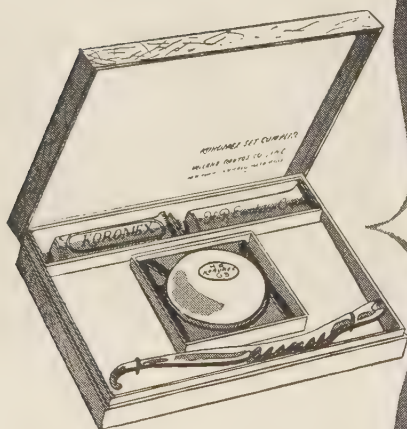
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JACOB GUTMAN, M.D., Phar. D., F.A.C.P., Brooklyn, N. Y., was born and educated in Riga, Latvia. He came to the United States in 1890, and was graduated with honors from Cornell University Medical College in 1900. After ten years of general practice, he went to Europe to perfect himself as a diagnostician, being connected there with the Allgemeine Krankenhaus, the K. K. Rudolfsplatz and other institutions where he was associated with Professors Carl von Noorden, Hans Eppinger, Schlesinger, Kovács and other eminent physicians. In 1912, he organized the Brooklyn Diagnostic Institute and at present is consulting physician to several hospitals. He is active in a number of medical organizations and has made valuable contributions to the literature of internal medicine. His hobby is gardening.

* * *

GEORGE RICHMOND, M.D., F.R.S. Brooklyn, N. Y., received his medical training in Great Britain, and is registered to practice medicine in the British Isles. He is a member of the British Medical Association, a Fellow of the Royal Society of Medicine, and did post-graduate work in London at various hospitals. He was associated with the British Medical Mobile Unit, A.R.P., during the war for several months. When he came to America he served internships at Saratoga Springs, and Fordham; at present he is associated with Fordham Hospital. He taught first aid under the auspices of the Brooklyn Chapter of the American Red Cross, and is the inventor of a number of devices of value in first aid treatment in warfare. His favorite pastimes are the reading of books on war surgery and medical history, and his hobbies include tennis, baseball and swimming, his latest being photography.

* * *

Correction.—In our January issue we stated that Dr. Zikmund Winter was engaged in private practice. Dr. Winter informs us that this is not correct. He came here from England last May and took the New York State Board Medical Examination in January of this year but has not yet been licensed to practice.

International Health

The League of Nations has been scoffed at by many as a dream which accomplished little, but it contributed greatly to the health of many nations, and the machinery which it established has been preserved and may be used after this war, said Louis H. Pink, president of Associated Hospital Service of New York, in an address delivered before the conference of Blue Cross Hospital Service Plans. Three important international health agencies which are helpful in controlling disease in times of peace are: The Health Organization of the League of Nations, the International Public Health Office in Paris, and the Pan-American Sanitary Bureau in Washington. After the first World War, the League achieved international agreements on a series of measures for the control of disease, establishing Geneva as the center for the health education of the Western World and Singapore for the East. It stimulated the medical services of China and Greece, which had no organization prior to 1914. The League was also responsible for the standardization of anti-toxins, and through its influence the potency of many medicines, vitamins included, was established.



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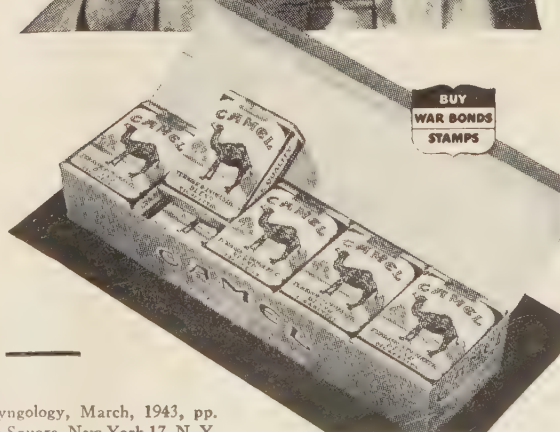


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New reprint available on cigarette research—Archives of Otolaryngology, March, 1943, pp. 404-410. Camel Cigarettes, Medical Relations Division, One Pershing Square, New York 17, N. Y.

Local Use of Sulfonamides in Nasal and Sinus Infection

Noah D. Fabricant (*Am. Jour. Med. Sc.*, Oct. 1943) presents a valuable analytical review of the observations and conclusions of some forty investigators in the field of nasal and sinus infection. It has been said that the introduction of sulfonamide compounds as prophylactic and curative agents in the field of surgery has not been an unmitigated blessing for surgeons because of the growing tendency to neglect fundamental principles and techniques and rely on the use of the "wonder drugs". Fabricant believes that in a limited sense this applies also to the promiscuous local use of sulfonamides in nasal and sinus infection, since it may cause many physicians to neglect sound physiological principles upon which rational nasal and sinus medication rests.

A clearer understanding of how drugs work in the rhinological field is gained by studying their effects on several important factors: The behavior of the mucous membrane lining of the nose, ciliary action, nasal pH, and the production of systemic side effects. Fabricant says: "Nasal medication harmful to ciliary action impairs a highly important function; markedly alkaline drugs are very irritating to the nasal mucous membrane; drugs prompting pathological changes in the underlying mucous membrane are agents to be avoided. Drugs which induce toxic reactions following intranasal medication are undesirable and merit small consideration in routine practice. Conversely, nontoxic medication, compatible with ciliary action, possessing a physiological nasal pH and nontraumatizing to the mucous membrane, is most useful in the treatment of nasal and sinus diseases—for it functions on a rational, physiological basis."

A survey of the reports of a number of workers shows that solutions of sodium sulfathiazole may exert an early and destructive effect on nasal mucous membrane. The cilia and superficial layers of columnar cells are to a large extent destroyed. The pH was approximately ten. Other experiments on mice showed disorganization, though not destruction of the olfactory epithelium, purulent exudate in the sinuses, and inflamed mucous membrane, with a number of the mice developing bronchopneumonia. Autopsies on rabbits treated with sulfanilamide derivatives produced evidence of inflammation throughout the nose, more marked in animals in which sodium sulfathiazole and butanoylsulfanilamide were used. Injury to the entire nasal mucous membrane with greatest destruction in the olfactory area was noted. Sodium sulfadiazine, while not so completely destructive, was found to be definitely injurious.

Fabricant has previously reported that the normal, physiological nasal pH values of the human being are in the range between approximately pH 5.5 and 6.5. He has suggested the value of nasal medicament to lower the abnormal alkaline pH found in acute and active stages of rhinitis, rhinosinusitis and allergic rhinitis to the normal slightly acid level. Sodium salts of the sulfanilamide group are extremely alkaline, and cause caustic effects. Furthermore, solutions may become yellow on standing and may decompose within a few days. Sprays of a five percent solution of sodium sulfathiazole as well as tampons have the same drawbacks. Sulfathia-

zole in combination with vasoconstrictors may excite allergic response in susceptible persons.

To obviate the strong alkalinity, irritating properties and deterioration of sodium solutions, sulfonamides have been dissolved in propylene glycol, three percent solution of sulfathiazole, three percent solution of sulfapyridine and ten percent solution of sulfanilamide. A solution approximating normal physiological nasal pH values was obtained. One experimenter reports that a three percent solution of sulfathiazole in propylene glycol when used locally was nonirritating and non-toxic. The effect of this solution on ciliary action in the nose needs further study. A combination of sulfanilamide and allantoin lends itself to use in intranasal therapy. Colloidal silver preparations of sulfanilamide, sulfathiazole, sulfapyridine and sulfadiazine have been investigated. Silver sulfanilamide darkens rapidly but it is possible that other nonirritant chemical combinations of the sulfonamides may be found useful after further study.

The small but steady stream of clinical reports bears out the fact that many writers neglect the available knowledge of nasal physiology in seeking a cure-all for the complex problem of chronic sinusitis. It is almost generally agreed that the local use of chemotherapeutic agents has little effect on the common cold. Their value in sinusitis is not yet determined. Some apparent beneficial effects may have been reactions to technique or to local stimulation, or even reaction to irritation.

Some of the methods used are here listed with comments presented. Spraying the nasal passages and pharynx with 2.5 percent sulfadiazine triethanolamine solution may prevent many nose and sinus complications. Sulfonamide powder applied to the mucous membranes of the sinuses by the intranasal route seemed more effective than the solution in cases of chronic purulent sinusitis. Some authors note that acute nasal infections respond best to the local use of sulfanilamide powder and chronic rhinitis best to sulfathiazole powder. Coarse powder was not adaptable for use in nasal cavities; forty to one hundred mesh character proved to be the most satisfactory. Twenty or fifty percent sulfathiazole jelly is an effective therapeutic agent when injected into the maxillary sinus showing evidence of chronic maxillary sinusitis. A suspension of sulfathiazole was considered better than sodium sulfathiazole in clinical practice. Some writers, however, question the value of sulfonamide preparations instilled locally into the maxillary sinus. It is believed that the local use of sulfonamide compounds does have a place in postoperative treatment of sinuses where a radical operation has been performed with removal of diseased mucous membranes. Its action, as in surgical wounds elsewhere, in keeping down infection, is unmistakable.

Microcrystalline forms of drugs of the sulfanilamide group, either in suspension in a physiological solution of sodium chloride or in an aqueous solution of para-drine hydrobromide which has a vasoconstrictor action, were used locally with apparent safety. No studies were made to determine the effect of the drug histologically upon the mucous membrane. Microcrystalline preparations were found to be effective in the treatment of acute infections of the upper respiratory tract, acute sinusitis, and in selected cases of chronic sinusitis.

(Continued on page 120)

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MEDICAL RECORD

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VOL. 157, No. 2

FEBRUARY 1944

WHOLE No. 2733

IS GASTRIC ANALYSIS NECESSARY*

MAX EINHORN, M.D.

New York, N. Y.

The advances made in medicine during the last century concern partly the development of gastroenterology as a specialty. This field was opened by the American physician, Beaumont, and greatly advanced by the European investigators Kussmaul, Leube, Ewald, Boas, Cohnheim and Riegel (of Germany), Nothnagel (of Vienna), Reichmann (of Poland); Surgeons Billroth (of Vienna), Mikulicz (of Breslau), Sands and Wyeth (of New York); Charles G. Stockton (of Buffalo), Charles D. Aaron, M. E. Rehfuess, Hemmeter, J. Friedenwald, B. B. Crohn, S. J. Meltzer, A. Jones, W. G. Morgan, B. B. Lyon, J. Kaufmann, Kinnicut, A. Garbat, Cannon, W. Coleman, Ivy, Rafsky, Bassler, and numerous others of the United States of America. Other surgeons in the United States we might mention are: Fred Lange, Arpad G. Gerster, Bull, Weir, Murphy, Ochsner, Willy Meyer, the Mayo Brothers, DeWitt Stetten, Cort Eggers, and J. C. A. Gerster.

Most workers in the field of gastroenterology busied themselves with studies involving gastric secretion and the motor function of the stomach. An attempt to visualize the interior of the stomach was made by Mikulicz but not further developed. Rosenheim, Kelling and several other clinicians of Germany improved the gastroscope and worked with it.

In the United States, Chevalier Jackson deserves a great deal of credit for inspecting the stomach with a straight gastroscope. But the real advance in this respect was made by the Wolf-Schindler flexible gastroscope, and Schindler deserves much credit for introducing and popularizing this instrument in the United States.

The next great step in the advance of gastroenterology was made by Roentgen in giving us the wonderful x rays, which can penetrate all media in existence, provided one has the right machinery.

With regard to medical diagnosis and treatment, it is always essential to utilize means which are not too hard on the patient and not too difficult for the physician. We all well know that sometimes it is easy to make a correct diagnosis by listening attentively to the patient's complaint and by asking a few questions which he answers with yes or no.

The next step in an attempt at making a diagnosis is to investigate the activity (or the functional working) of the organ affected. Centuries ago physicians

always examined the urine in affections of the kidney. At first they inspected the urine, and later on they subjected it to various chemical tests. The bowels were examined by subjecting the feces to inspection and to various chemical tests. Later on all the organs of the body were examined with regard to their ability to carry on their necessary functions. It is quite clear that, in order to do a good job, the physician will apply the examination necessary merely to the organ affected, in order to avoid unnecessary burdens to himself or the patient.

Returning to our topic of gastroenterology, the importance of the chemical activity of the stomach had been discovered by Beaumont and further studied with great care by a host of physicians here and abroad. Next to the chemical function of the stomach the pathology of this organ was likewise subjected to scrutiny (Hayem, Boas, Ewald, Fenwick, Kinnicut, Faber).

In studying the tiny little pieces of mucous membrane found in the washwater of the stomach of dyspeptic patients, I found several classes of pathological states in the gastric mucosa; hypertrophy; atrophy, also inflammatory conditions, as proved by the presence of multiple small cells infiltrating the neighboring glands. These phenomena were found at different places in the stomach. This organ sometimes showed atrophy in one part and hypertrophy in another region. The same applies to the small infiltrating cells which are usually considered as signs of inflammation.

With regard to gastric secretion, hypertrophy of the glands was more frequently encountered in cases of hyperchlorhydria and atrophy in hypochlorhydria (or diminished acidity).

Charles G. Stockton and I found that in treating the two varieties of these functions with intragastric faradization we got good results. We wondered why opposite conditions should be ameliorated at the same time by one and the same remedy. The explanation seemed to be that these different conditions were due to nervous disturbances and that the electricity ameliorated the nervous state.

In order to explain the variations encountered in the functional workings of the stomach, I adapted W. Roux's theory who says there exists the following law: "Increased activity heightens the specific force of the organs, while a diminished activity causes a weaker state of the organs." Each cell, according to this writer, has to gain a living by work, and the more it

*Read at the sixteenth Graduate Fortnight of the New York Academy of Medicine, at the Lenox Hill Hospital, October 18, 1943.

works the better nourished it is and the stronger it grows.

"Strife is the cause of all", Herakles once said, and the entire truth of this statement has been appreciated since the work of the great Darwin and his followers, Haeckel, Roux and others.

The facts just mentioned show the importance of functional activity with regard to the state of an organ; the elements which come more into play and do more work will gain supremacy; they will increase in strength and in numbers.

This explains why hyperchlorhydria is frequently associated with proliferation of the glands and achylia with their atrophy. It remains, however, to explain, why the increased function of the glands does not always show hypertrophy of the gland, and, vice versa, their inactivity an atrophy. This can be answered by assuming that the functional activity or inactivity has not lasted long enough to produce those changes over the entire organ. There is also a possibility that the glands in the various portions of the stomach are subject to different actions. In this way there may be at times hypertrophy and atrophy distributed on different portions of the same stomach.

Inasmuch as gastric analysis indicated too much activity usually in cases of hypertrophy of the mucous membrane of the stomach, and subacidity or achylia in cases of rather atrophic states of the gastric mucosa, it was generally accepted as advisable to designate the affection of the stomach according to its functional activity. Thus the terms, hyperchlorhydria, subacidity or hypochlorhydria, and anacidity or achylia have been submitted as indicating the presence or absence of the functions of the stomach.

These designations appeared to be justifiable inasmuch as they also, as a rule, corresponded to different types of suffering encountered in these patients. Thus, in hyperchlorhydria pains usually appear two to three hours after a big meal and about one hour after a small meal. In subacidity slight discomfort and ructus are likely to occur pretty soon after any meal.

These functional symptoms could be ameliorated, in most instances, by giving a small amount of alkali or a small meal of milk and crackers one or two hours after meals in cases of hyperchlorhydria; and a few drops of hydrochloric acid or a bromide in cases of deficient gastric juice.

With regard to the term hyperchlorhydria, allow me to mention that the great surgeon, Moynihan, selected this group of cases as likely to have duodenal ulcers. He maintained that cases in which pains occur two to three hours after meals and are alleviated by the tak-

ing of food, are typical of duodenal ulcer. The attacks appear each year at a certain season lasting several weeks alternating with free periods of intermission.

According to Moynihan such a history given by the patient enables the physician to make a diagnosis of duodenal ulcer and have the patient operated upon. Having had great experience in these cases, I must say that a great many of such patients will recover without any operation, provided they lead a rational life; no excitement, no worry and no overindulgence in drink or tobacco.

In long-standing cases of the type mentioned above, we are likely to find peptic ulcers (not always duodenal), and these patients should be treated for their ulcers with the best methods of affording rest to the stomach and healing the ulcer. When these methods fail, an operation then becomes necessary.

As is well known there exist intestinal conditions caused by gastric ailments. As such, we know that cases of subacidity frequently are accompanied by diarrhea. In contradistinction, patients with hyperchlorhydria often suffer from constipation. The first group (subacidity) is easily managed by hydrochloric acid, while the second group (hyperchlorhydria) can be helped by alkalies.

Again in operative interventions it is of great importance to know whether gastric secretion is normal, too acid, or whether there is no acidity present. As can be seen from the statements just described, analysis of the gastric contents gives important indications with regard to treatment. Not only does it indicate whether alkalies or hydrochloric acid is necessary for the direct treatment of the stomach, it also shows that intestinal disturbances dependent upon the faulty state of the gastric function can be remedied by the same manipulations, i.e., by helping the stomach. Occasionally, these simple remedies make an operation unnecessary; instances of this type I have observed quite frequently.

Dr. Abraham Ayala Gonzalez, one of the great surgeons of Mexico, lays much stress on the function of the stomach with regard to acid secretion. In its presence larger resections of the stomach are essential in operating for gastric ulcer. In conditions of achylia, however, a gastroenterostomy does not give rise to new ulcer formation near the stoma.

Is gastric analysis necessary? This question must be answered in the affirmative.

As shown in the text a great many conditions can be cured by simple remedies ameliorating the disturbed functions not only of the stomach but frequently also of the intestine.

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PROSTIGMIN IN THE TREATMENT OF EXOPHTHALMIC GOITER

A Report of Fifty Cases

ISRAEL BRAM
Philadelphia, Pa.

In 1931 (1), in a paper on the use of physostigmine (eserine) in the treatment of exophthalmic goiter, and again, five years later (2), I suggested this drug as an asset in the management of this disease.

Irrespective of the basic treatment advocated or adopted for sufferers from exophthalmic goiter, the

immediate objective of the physician is a reduction of the heart rate to normal. Many clinical facts justify this aim. The heart bears the brunt of the damage wrought by the intensity and duration of Graves' syndrome, and cardiac failure is the usual cause of death. The heart rate usually parallels the severity of the

entire syndrome. Likewise, amelioration of symptoms or recovery of the patient is announced by a calming of the heart rate and force. Indeed, the heart's action may be regarded as the most reliable criterion of the disease during crisis, remission or recovery, as the case may be (3).

It may be recalled that years ago digitalis was employed in exophthalmic goiter with much wishful thinking and more futility. Almost universally it has now been established that the basic drive of the heart hurry in Graves' disease could not be controlled by this drug. Some fifteen years ago our unpublished observations in a series of cases revealed that digitalis might be of benefit only under the following conditions: 1, in combination with quinidine sulphate, in an effort to restore rhythm in a fibrillating heart; 2, during approaching remission; 3, as a supplementary measure during impending or actual circulatory decompensation, and 4, when in the favorable course of the disease improvement in the condition of the heart lags behind obvious improvement elsewhere. In other words, when basal metabolic rate, body weight, sense of well-being and other clinical evidence point to impending recovery, but the heart maintains a rate of 80 or over, digitalis may be of value. When we sought to evaluate the effects of digitalis in the tachycardia of active, previously untreated cases of exophthalmic goiter results were most discouraging. These comments are applicable also to the various derivatives of digitalis and to the commonly employed "heart stimulants," including strophanthus, convallaria root and sparteine.

With regard to the direct or immediate cause of the heart hurry in exophthalmic goiter the consensus points to a dominating sympathicotonia, over which the checking influence of the vagus nerve is inadequate. Hence it appears reasonable to assume that any measure capable of alleviating sympathicotonia, either directly or by stimulation of the vagus nerve, or both, could claim an important place in the treatment of exophthalmic goiter. Also, it appears logical to infer that such a measure could favorably influence other sympathicotonic evidences, as exophthalmos and the intestinal sluggishness observed in some cases.

Physostigmine

Our previous observations in two hundred cases of active exophthalmic goiter treated with physostigmine, and the present study, begun in 1939, of an additional fifty cases treated with prostigmin, indicate that these drugs largely conform with the requirements mentioned. According to Cohen and Githens (4), physostigmine (eserine) exerts its action chiefly on the autonomic nervous system, slowing the heart by a stimulating influence on the cardiac endings of the vagus nerve. We found that physostigmine and prostigmin reduce the force and rate of the heart's action in approximately seventy-five percent of our cases, with improvement in subjective and objective symptoms. Moreover, these drugs exert a beneficial influence on exophthalmos and overcome deficient intestinal elimination. Theoretically, it would appear that a reduction of heart rate and force would reduce the vascularity and size of the hyperplastic thyroid gland and consequently the excitability of this organ. This actually occurred in the majority of cases in this series.

Prostigmin

After evaluating a large number of synthetic analogues of the parasympathetic stimulant physostigmine, Aeschlimann and Reinert (5) found prostigmin to be the most suitable from the point of view of low toxicity and effectiveness. Prostigmin is the dimethylcarbamate ester of 3-hydroxy-phenyl-trimethyl-ammonium methylsulfate. It is a synthetic compound resembling physostigmine, but differing from this alkaloid, chemically, by its less complicated structure.

Prostigmin seems to possess practically all the physiological properties of physostigmine, with some favorable differences. It is more stable and dependable, produces less myosis, and is less depressing to the heart and blood pressure than is physostigmine. Its action on intestinal tonus and peristalsis is quite similar to that of physostigmine.

Prostigmin curbs cardiac excitability and hurry by stimulation of the cardiac endings of the vagus nerve and possibly also by a depressant effect on the cardiac accelerator endings of the sympathetic. Thus, with an approach of the heart rate to normal, the systolic blood pressure as well as the pulse pressure are reduced in uncomplicated cases of exophthalmic goiter.

Prostigmin reduces intraocular tension, constricts the palpebral fissure, appears to alleviate the weakness of the extraocular muscles and thus improves exophthalmos. This result was pointed out by Zondek in 1938 (6). In the presence of exophthalmos (spontaneous, postoperative or postradiation) in association with a normal or low heart and metabolic rate, prostigmin may be given cautiously and with proper doses of thyroid substance if there are no contraindications to thyroid medication. This combination of prostigmin and thyroid often yields gratifying results in the treatment of severe exophthalmos.

Prostigmin improves general muscular tonus and in so doing diminishes and tends to overcome one of the main complaints of the sufferer from exophthalmic goiter, namely, fatigability, especially of the quadriceps muscles.

Contraindications to the use of prostigmin in the treatment of exophthalmic goiter are few. Star (7) points out that ordinarily prostigmin should not be given while the patient is under the influence of quinidine. I find that in exophthalmic goiter this antagonism does not exist; the two substances in combination are very useful in the event of auricular fibrillation. In obvious vagotonia, especially with diarrhea, sialorrhea and severe sweating, prostigmin is contraindicated until these symptoms are improved. Other contraindications to prostigmin are bronchial asthma and marked debility of the aged—rather rare complications of exophthalmic goiter.

Dosage

Optimum improvement from the use of prostigmin is reached after several weeks and at that time the curve depicting the rate of improvement flattens out in a plateau-like manner. At this time a "maintenance" dose may be given until it is apparent that effects are enduring. If such be the case then the drug may be withdrawn.

The drug was administered orally in the form of prostigmin bromide in doses of one-half to one tablet (seven and one-half to fifteen mg.) three times a day.

Larger doses were found unnecessary and undesirable. It was given for a period of ten weeks, at the end of which period the maximal benefit from the drug was achieved and it was gradually withdrawn from the therapeutic regime. In those who did not show tangible benefit from prostigmin within three or four weeks the drug was discontinued. In no instance was it necessary to withdraw prostigmin because of excessive sweating alone.

Clinical Features in This Series

In this series of fifty cases of exophthalmic goiter the ages of the patients ranged from twelve to sixty-eight years, with an average of thirty-five years. Thirty-five were females and fifteen males. The duration of the illness as stated by the patients when first observed varied from six weeks to twelve years, with an average of seven months. The basal metabolic rate ranged from plus eighteen to plus ninety percent, the average being plus thirty-eight percent. The heart rate varied in different patients from eighty to one hundred and eighty a minute, with an average of 104. Auricular fibrillation was present in twelve cases. Exophthalmos in varying degree was present in thirty-four cases.

The previous treatment of the patients prior to our attention varied. There were ten instances of postoperative persistence or recurrence of exophthalmic goiter; seven patients had undergone radiation; twenty-four had received various forms of medical attention, especially rest and the administration of iodine, and nine had received no previous treatment.

Course Under Treatment With Prostigmin

On the conviction that no single procedure is capable of effecting enduring recovery from exophthalmic goiter, the regime administered included such additional measures as a high caloric diet; insistence on a daily stay in bed of at least ten hours, depending on the severity of the case; the administration, when indicated, of quinine or quinidine; the administration of minute doses of iodized calcium in selected cases; an occasional medicament to overcome insomnia, digestive disturbances, and other symptoms from time to time requiring attention; the correction of discoverable infectious foci wherever feasible, and finally, the application of practical psychotherapy (8).

With a view to checking up on the benefit assignable to the administration of prostigmin, the records of another twenty-five cases of exophthalmic goiter in which no prostigmin was given were studied as controls. These patients were otherwise managed in the same manner as were those to whom prostigmin was administered. It was found that in patients receiving this drug, the results obtained, particularly those referable to the heart, occurred several weeks sooner than in patients not receiving prostigmin, and the tendency toward the cyclic flaring up of symptoms or crises was decidedly diminished.

As in the case of the physostigmine observations, the primary object of the administration of prostigmin was the lowering of the heart rate. In the majority of cases the rate was materially lowered within six weeks to the extent of elimination of subjective precordial complaints.

In patients suffering from auricular fibrillation, prostigmin alone seemed more effective than quinidine alone, but the combination of prostigmin, quini-

dine and digitalis was quite successful in the control of cardiac excitability and restoration of rhythm. A combination of seven and one-half mg. of prostigmin, five grains of quinidine sulphate, and one-quarter grain of extract of digitalis was given three times a day.

The most stubborn and at times exasperating and distressing symptom of exophthalmic goiter is exophthalmos. Even under expert thyroidectomy exophthalmos not only persists in a variable percentage of cases, but in some cases, without exophthalmos at the outset, this symptom may develop postoperatively in severe form. The literature on postoperative progressive exophthalmos is becoming substantial. At best, improvement in exophthalmos is among the last events in the clearing up of the syndrome, and in some patients the eyes never become quite normal. A measure to improve exophthalmos in a more or less specific fashion has been a crying need through the years. In view of the results previously observed with physostigmine and now with prostigmin, it is felt that we are approaching a solution to this problem. In patients with associated clinical hypothyroidism the addition of judicious doses of desiccated thyroid will often expedite regression of severe proptosis. The eyes of patients under treatment with prostigmin are apt to improve simultaneously with manifest improvement elsewhere; a goodly percentage of our patients with and without a history of thyroidectomy, suffering with residual exophthalmos of many years' duration, has been greatly benefited or completely relieved.

Aside from exophthalmos, involution of the thyroid hyperplasia in our series usually followed circulatory and general improvement. The average time of complete recession of thyroid swelling was approximately twelve months, during most of which time the patient as a whole was quite well, with a normal basal metabolic rate.

Variables in Results

The patients who were benefited to the greatest degree by the administration of prostigmin may be classified under five headings: 1, patients under fourteen and above forty; 2, those approaching remission after having had one or more crises; 3, sufferers from this disease over a period of three or more years, i.e., the chronic or protracted forms of exophthalmic goiter; 4, those presenting a basal metabolic rate of plus forty percent or less, and 5, those with cardiac arrhythmia. On the other hand, patients least benefited were young adults presenting a basal metabolic rate above plus forty percent, and those who were in crisis associated with cerebral excitation. However, prostigmin was generally productive of good results after the crisis was passed.

End Results

Since statistical records of subjects of exophthalmic goiter would of necessity require the personal following up of those dubbed "cured" or "recovered" for a minimum of five years, it is not within the scope of this paper to discuss end results in this series. They have not been observed long enough to permit of such statements. However, we may state that in twenty-eight patients, or fifty-six percent, the pulse and basal metabolic rates have now remained normal for more than three years. More than half of these patients were well enough to resume their customary duties within a few

(Continued on page 109)

Symposium on War Medicine

POSTWAR PLANNING IN MENTAL HYGIENE

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The mental health situation today presents a number of important problems of concern not only to psychiatrists but to general practitioners of medicine as well.

During wartime, the medical profession is faced with a two-fold obligation: 1, To keep physical and mental casualties among the military personnel down to a minimum; 2, to maintain at the highest possible level, the morale of the civilian population, which is exposed to the psychological consequences of war.

The high incidence of mental casualties of the last war emphasizes the importance of intelligent management of psychiatric problems within the armed forces of the present war. Psychiatrists in 1917 identified some seventy-two thousand soldiers who were regarded as potential or actual "psychiatric misfits" and discharged them to their homes. Each soldier who became psychiatrically disabled cost the taxpayer thirty thousand dollars in hospitalization, insurance and disability payments. More than a billion dollars were spent for the care of this type of casualty alone in the war of 1917-1918.

Today psychiatrists are "screening out" the unfit and keeping the economic burden of future rehabilitation down to a minimum. It is predicted that the percentage of war-induced mental casualties in the second world war will be much smaller than in the first world war, as evidenced by the figures quoted below:

"During the first eleven months of 1942, seven out of every one hundred were rejected at the induction centers because of mental instability. Discharges on mental grounds in 1942 were 4.3 per 1,000, or four percent, compared with 7.14 per 1,000 in 1918. Discharges in 1942 represented largely those cases detected in training, many of which were men who could return to useful civil occupations. In most of the 1918 cases the men were mentally broken under the stresses of actual warfare".

Etiological Factors

The following are some of the etiological factors that are responsible for nervous and mental disorders among members of the armed forces:

1. *Hereditary and constitutional factors*.—a. Neuro-pathic and psychopathic hereditary tainting. b. Constitutional predisposition to emotional disorders.

2. *Prepsychotic or psychopathic make-up*.—a. Maladjustments existing prior to induction or enlistment in the military service. Many inductees conceal the fact that they were former inmates of mental hospitals. Psychiatrists are of the opinion that "war enhances the possibilities of a breakdown in individuals who were predisposed to breakdowns in the first place." b. Criminal and psychopathic records prior to induc-

tion which find expression in a disregard or disrespect for military discipline.

3. *Physical stress and strain*.—a. Prolonged fatigue that gives rise to "nervous irritability". b. Inability to withstand physical stress of combat.

4. *Economic worries*.—a. Worry over economic difficulties at home. b. Fear of postwar insecurity. c. Awareness of decrease in income as compared to economic status in civilian life.

5. *Preoccupation with family and domestic affairs*.—a. Nostalgia and separation from loved ones. b. Various states of anxiety associated with feelings of jealousy and suspicion regarding the fidelity of wives left behind. c. Fear of being forgotten by relatives back home. d. Discouraging news from home, resulting in depressed moods. (Domestic difficulties, family dissensions, marital discords, sickness and death in the home.)

6. *Sexual maladjustments*.—a. Lack of contact with the opposite sex. b. Sexual difficulties associated with repressions, heterosexual inhibitions, homosexual panics, guilt feelings from masturbation, sexual deviations, sex phantasies, fear of venereal diseases.

7. *Social inadequacy*.—a. Feelings of social and competitive inferiority.

8. *Psychological causes*.—a. Fear of anticipatory death. b. Frustrations arising out of feelings of uncertainty. c. Feelings of racial discriminations.

9. *Combined factors*.—a. Colonel Roy D. Halloran, chief, and Lieutenant Colonel Malcolm J. Farrell, assistant chief, of the neuropsychiatric branch of the Surgeon General's Office, list the following disturbances which are likely to induce neuroses among soldiers: "Noise and concussion of battle, fatigue, lack of food and water, privation, fear, separation from and worry about the family, sight of blood, or of comrades being killed and wounded."

In an elaboration of this subject, they state: "For the average person, the change from civilian life to military life is terrific. A man changes from an ordinary to a regimented existence. The unknown future lies ahead, with prospect of killing, abhorrent to him. The food is different. He misses the family and must live in close association with a large number of companions. In training, the soldier is put through physical and mental stresses similar to those in a battle, to test him and prepare him by building him up. Happily, most men have elasticity and adaptability and can adjust themselves. The man who cannot adjust himself to his conflicts, may sooner or later develop an ailment which has a mental rather than a physical basis."

b. Dr. Harry Stack Sullivan lists four essential factors which he believes responsible for the emotional stress and strain among men in the military service:

- “1, separation from home; 2, need to accept authority; 3, transition from a peaceful to an aggressive endeavor; 4, fears of injury and death.”

Prevention of Psychic Effects of War

These causes of wartime casualties have not gone unchallenged however. Efforts have been made to adopt and put into practice specific measures which tend to prevent as well as counteract the “psychic effects of war”.

1. *Weeding out the misfits.*—a. Trained psychiatrists have been placed on draft boards to examine and reject those misfits and those likely to “crack” under the strain of military life (potential shell shock cases). b. There has been a more efficient type of selective service psychiatry administered in the second world war. c. We now have one psychiatrist available for every fifty men inducted daily at the various induction centers.

d. Psychiatrists at training camps not only attempt to further “screen out” the unfit, but assist others towards making a more adequate adjustment to military life. Here again we may quote Colonel Halloran: “The psychiatrist’s duty is not only to watch and help individuals but to create conditions wherein the stresses are minimized. He must help devise means of relaxation and entertainment. He must live with the troops, experience their difficulties and help to solve them. The psychiatrist is a specially trained medical confidant with a real desire to help and the ability to help.”

2. *Better psychiatric management.*—a. There has been a trend to utilize and appreciate the value of psychiatric concepts to a much greater extent in the second world war. b. A four weeks’ course in military neuropsychiatry is now being offered to Army psychiatrists at the Lawson General Hospital in Atlanta, Ga.

3. *Relaxation through recreation.*—a. U. S. O. recreational programs help to keep soldiers in a good frame of mind. Dances enable him to come in contact with the opposite sex. Movies, plays and concerts are prescribed as an antidote for “war nerves”. b. The establishment of stage door canteens and similar projects serve as a source of moral encouragement.

4. *Economic security.*—a. Steps have already been taken to give families of enlisted men a monthly allotment for their economic support. This not only helps to relieve the soldier of worries over home finances, but has a practical psychotherapeutic effect on civilian morale among relatives back home.

5. *Psychotherapy through correspondence.*—a. Free stationery and delivery of mail stimulate contact between the soldiers and the family. Letters on phonograph discs promote enthusiasm. “V” letters microfilmed and delivered, speed up communication and boost morale. Families and relatives have been encouraged to write frequently to the men in uniform.

6. *Sublimation.*—a. Sports, athletics and recreational games provide a healthy release of pent-up sex tension.

7. *Applied psychology.*—a. The utilization of “applied psychology” in the form of constructive propaganda as a weapon against subversive propaganda. b. Prevention of morale-contamination through the early segregation, hospitalization and disposition of neurotic, psychotic, and psychopathic cases at camp. c. Maintenance of civilian morale at the highest possible level.

Postwar Mental Rehabilitation Program

One of the most important health problems today is the need for and development of a practical postwar rehabilitation program. There is much controversy as to what should be included in such a program. In fact some contend that not enough is being planned to prevent what might grow or might prove to be, a postwar critical situation. For instance, here is what Homer Folks, secretary of the New York State Charities Aid Association, had to say regarding “postwar planning”. Quoting from his article, “Welfare Agencies and Mental Health in Defense”, which appeared in the January 1942 issue of *Mental Hygiene*:

“Have we in mental hygiene a program to lay before the planning authorities who will shape this postwar social program for the country? I assume that we have not as yet.

“Have we sufficient knowledge of the origins and causative factors of mental diseases to frame a preventive program in this field? The first necessity is to enlarge our knowledge.

“Have we agencies in research in psychiatry of such magnitude, finances and prestige that we can expect them to put into our hands at as early a date as possible the additional knowledge that will enable us to frame an adequate preventive program?

“Are we not ourselves partly to blame for that? Have we demanded agencies of research in this field so loudly and so constantly that public authorities and private resources would be led to devote a suitable amount of funds—and a “suitable” amount would be very large; of personnel which, if suitable would be of the very highest ability, comparable to the social harm that mental diseases are causing? Unless and until we insist upon and secure research agencies for mental hygiene of such a degree of magnitude we ourselves are in default.

“That appears to me to be the order of today for the mental hygiene movement now and after the war is over. May we all achieve in this part of our field that vision without which the people continue to perish.

It is the author’s opinion that any postwar rehabilitation program should stress the provision of *specific psychotherapy* in mental hospitals, which has been defined as “an effort to influence in the right direction the attitude of the patient, to influence his attitude toward himself, toward his mental and physical processes, toward his environment. It is an effort to teach him to understand himself, his illness and its cause, whether in his body, in his environment, or in the superficial or deep layers of his mental life.

There has been too great a tendency for institutional psychiatrists to become “diagnosticians” rather than “psychotherapists”, classifying patients and treating them symptomatically. There has been entirely too much emphasis placed on custodial care, “paper work”, ward administration, etc. Rest and sedation, *per se*, will not cure a mental patient. He needs the combination of “emotional release” through mental catharsis and graduated doses of “insight therapy” through re-education.

Suggestions for a Postwar Hygiene Program

The following suggestions are submitted for consideration in the drafting of a postwar mental hygiene program:

1. All neuropsychiatric institutions should maintain a "psychotherapy clinic", where patients can discuss their emotional conflicts in detail with a trained psychotherapist who should devote his entire time toward giving advice to mental patients and the help that they seek.

2. Psychiatrists should be trained in techniques of active psychotherapy and acquainted with psychoanalytical concepts. They should encourage a closer rapport with their patients. It is surprising how many psychiatrists fail to use the "psychotherapeutic approach".

3. Orienting physicians with postwar psychiatric disorders and with the early recognition and prompt handling of emotional problems.

4. Distribution of mental hygiene literature regarding postwar attitudes towards soldiers returning to civil life. Postwar psychiatry should be responsible for the dissemination of knowledge pertaining to the preventive aspects of nervous and mental illness.

5. Educational opportunities for men who have had to discontinue college because of military service and plans for vocational training of demobilized personnel.

6. Extension of mental hygiene activities. Mental health is a medicosociological problem and should not be the responsibility of psychiatrists alone. Of the 180,000 physicians in this country, only three thousand are psychiatrists. It should be the duty, therefore, of physicians, social workers, teachers, nurses and related groups to recognize psychiatric cases in their incipient stage and refer them for psychiatric treatment. The public should be more conscious of mental hygiene.

7. Provision of psychiatric guidance for all in need of such help. Psychoanalysis when indicated should be available to the poor as well as the rich. This can be

accomplished through the establishment of a sufficient number of "rehabilitation clinics" scattered throughout the country. Considering the enormous cost of maintaining the support of mental institutions, such a measure would prove more economical in the long run.

8. Health insurance plans should employ the services of psychiatrists, whose duty would be to differentiate between illness due to organic causes and that due to psychic factors.

9. The establishment of a diagnostic and therapeutic neuropsychiatric institution in the nation's capital where research projects could be carried out toward the prevention, if not the cure, of nervous and mental illness.

Conclusion

As a concluding remark we might go so far as to say that our present war is conclusive evidence of the need for a postwar mental hygiene program, as it has often been implied that "more than a fair share of the ills of the world arise from circumstances which might be avoided through fuller understanding by man of his own psychology and mental outlook".

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COLUMBIA MEDICAL BUILDING

POPULATION AND THE WAR*

B. LIBER
New York, N. Y.

The subject of population is a vast one. All I can do in the fifteen minutes allotted to me is to emphasize one point, which seems to me of great importance just now.

In our youth we were taught that one of the effects of all wars was a readjustment of fecundity due to an unailing and mysterious law of population tending to restore the equilibrium of the sexes. It was a mere affirmation without proof and never convinced anyone. But it is certainly true that war conditions result in tremendous changes in the composition of the population and in the relationships between men and women.

Just now, and in this country, in addition to the direct and indirect casualties, to the great dislocations due to industrial modifications, there are new tendencies in marital life and greatly altered attitudes in regard to offspring. Although these variations from the normal or usual customs are artificial and transitory, they will not fail to throw a long shadow forward into the future.

They will do their share in affecting family life and in disturbing and disorganizing social life for a considerable number of years, at least for a couple of generations to come. They will have a share in influencing not only the material and economic conditions of all our people, but also in shaping their thoughts and mental trends.

I am referring, of course, to the increasingly excessive number of extremely early marriages of the last few years, a phenomenon that is still continuing; to the greatly multiplied extramarital sexual relations between youths in uniform or in civilian garb and girls in their teens; to the completely free rein in those connections; to the astounding tolerance of public opinion in these matters; to the extraordinary increase of the birth-rate and the many children born at the youngest possible ages of the parents—not to mention the great augmentation of venereal disease, which is an accompaniment of all wars, even on the home fronts.

In parenthesis be it said that I am far from being a strict moralist, nor am I antagonistic to the war. On the

*Read at a meeting of the International and Spanish Speaking Association of Physicians, New York, November 19, 1943.

contrary, I am one of its supporters, working as I do for the War Department, as I also did in the last war. In the last war, by the way, we had war babies too, but they never reached their present number.

In Nazi Germany, and until a short time ago in Fascist Italy as well, there was and there still is strong official pressure aiming at the quickest possible growth of the population, consisting of speeches, promises, gifts and threats to the people to have more children. The only thing not done was to put a trooper near each bed.

But here none of these methods was necessary. It was sufficient to create a situation which at the outset gave some apparent advantages to wives of soldiers and the hope that married men might escape military service. Later, when it appeared more likely that fathers were to be called into service it was hoped that the young mothers might be provided for by the government. This, of course, does not indicate a lack of patriotism or want of self-sacrifice in many other ways. This reaction, however, runs parallel with the devotion of the remaining majority of men and women of all ages all over the country, eloquent examples of which I constantly see in rehabilitation work.

The new viewpoint regarding marriage and children amounts almost to a revolution. For the last fifty years or so people of all social classes have gradually learned the necessity of regulating, limiting and spacing their offspring, until it became somewhat unethical to bring into the world unwanted children and particularly a too large number of them. This situation was caused by inexorable economic conditions, by intuitive inclinations, by the natural intelligence of modern, civilized couples, and also through intentional work among the masses of the people by the adherents of the birth-control movement. It spread through nearly all advanced countries of the globe. Frequently, the family planning was extreme, as the number of births sometimes went down to two, to one, to zero. However, what was nearly taboo until a short time ago, now becomes permissible.

We, the students of mind hygiene, not only as it concerns the individual, but also in terms of large groups, classes, and of society as a whole, cannot help thinking about the eventual later consequences of this upheaval.

What, then, may we expect? Two important obnoxious results.

First, a much higher number of feeble-minded persons, that is, many more mentally defective persons both in absolute numbers and comparatively to the present percentage. That their number is now more considerable than it is ordinarily believed may be seen from the following authoritative figures which I have reprinted in my book, *Between Mental Health and Mental Diseases*, and from which I quote:

"In 1934 there were over seventy-two thousand individuals in New York City alone having intelligence quotients lower than fifty . . . It is estimated that there are at least twenty thousand school children of defective intelligence in Greater New York . . . Fourteen percent of the residents of New York State—nearly two million persons—are below the average without actually falling within the classification of feeble-mindedness."

Second, we expect more psychosis because of the larger population and also a higher percentage. And

when we say mental disease we include the additional complications and all the disturbances involving the social circles around those patients and, still further, the entire social body. We have now plenty of cases as it is. The huge state and other institutions for the insane are overfilled and they contain more patients than the hospitals for all the physical maladies combined. But there are many more extramural, less advanced mentally ill persons, either able to function to a certain degree, or discreetly concealed and living as well as they can with their families.

The current marital conditions and sex relationships of the younger generation, atypical as they are for our present society and century and based as they are on straw fire love and on transitional interests, must needs generate strong frictions and bad conflicts and later separations, annulments, divorces, litigations, resulting from the fights and quarrels between the parents—incomparably more than exist today. And we know how unsuccessful a large proportion of the marriages are now. But in a tremendously large number of psychotics the home background, strife between parents, irregularities in the relations between father and mother, are either causes or powerful contributing factors in the causation of mental disturbances. All educators know how much home environment influences the child and also that children have a deeper sense of observation than is ordinarily attributed to them. Children, therefore, are aware of what is going on in the home and even the tiniest ones feel the coldness of the atmosphere or participate in the storms which they witness.

On the other hand, we see the sterile, or apparently sterile, couples running around to the offices of practitioners and specialists, and anxiously asking for some hasty and magic method to produce fertility.

Now it is all right to search into the reason for this condition, in either the male or the female partner, and to attempt to find a remedy or a means of correcting the condition, if there is a genuine and sincere desire and moral necessity to have a child or children. But, barring a few exceptions, it is undoubtedly a mistake to believe, as not only laymen but also many physicians do, that nearly all woman's ailments, somatic or psychic, may disappear through her giving birth to a baby. If that were true, none of the prolific mothers would ever be ill. The fact is, in the comparatively rare cases in which the efforts to fertilize the sterile woman are successful, the result is often disastrous for both the child and the mother. In the first place, it is not only unfair to the child, it may be a crime. No child should ever be born unless desired and enjoyed for its own sake! None should ever be brought into the world just to cure a selfish woman, especially if she is a psychopath, a sufferer from hysteria, psychoneurosis, schizophrenia, paranoia and other troublesome and ugly mental diseases. Frequently, instead of being healed, those mothers are more disturbed or confused after the arrival of the child, as the situation now becomes much more complicated. The hell into which the new creature lands is often indescribable and it would be a miracle if it escaped unscathed and without being mentally crippled.

Lately we have heard much more about artificial insemination than in the past, because our skill to perform it has slightly improved in contrast to the older ways. The idea is not new, it is really ancient. But so

far, in spite of the recent progress, it is, alas, still a failure in the great majority of cases, which, of course, should not discourage anyone from further research and experimentation.

Our chief objection is that the doctors who practice insemination often forget to make sure that the parents' mental state is normal and whether it warrants the birth of a child. A future life and all the lives deriving from it in the distant future are involved, and the physician's responsibility is therefore great. Heredity, although nowadays differently understood than in the recent past, must be taken into consideration. The doctor must seriously inquire into the health condition of those concerned and consider from all viewpoints the desirability of having a child, under the special circumstances in which it will be born.

I have seen in my psychiatric practice, both in my office and in the clinics with which I am connected, several mental cases of women, sent too late, after artificial insemination, done elsewhere, had unfortunately been successful, where the results were simply catastrophic.

A few days ago I was glad to discover that I was not alone in having had these sad experiences, and that my observations were confirmed by others. In a recent issue of the *American Journal of Psychiatry* a case of this kind is described by a prominent psychiatrist. Although insemination is so often a failure, it had to happen that in that particular case it worked. The doctor who was responsible for this performance disregarded the fact that during the ten years of their married life, the husband had had only imperfect sexual intercourse with his wife, and never any normal intravaginal relations, because she, being mentally ill and imbued with the idea that the act was "filthy", never permitted it. This time, inseminated under anesthesia, she conceived, and after childbirth her condition became infinitely worse.

No one should forget that the sexual relation does not consist of physical contact only, that the mind plays an important rôle in the act. True, impregnation

may take place without love, in fact even in a spirit of hate. The man may be intoxicated and only semi-conscious, the woman may be chloroformed or taken by force in a pogrom—and still conception may result. But under ordinary circumstances the sex relation should be surrounded with the best, the most favorable mental environment.

We are not yet in the era envisaged by eugenicists, and perhaps some of them go too far in their hopes. But voluntary, rational, enlightened eugenics is feasible, either after a personal study by the partners as to the possibilities and chances in their married life, or under the guidance of some ideal, as yet nonexistent—at least in this country—marriage counselling bureaus disseminated through the states. This, together with intelligent, soberly planned parenthood, would combat the haphazardness of loose childbearing with its subsequent, perplexing complications.

Birth limitation is never out of place. Even if a large family were not a burden to our minds, it is a crime against ourselves and against society. Many inhabitants of this planet are mere "accidents". Let us prevent them! It is true that now there is no need of preaching birth control. People everywhere are aware of it. Frequently it is misunderstood. Have I not met an old lady who, although she herself had had several children, now all married, was proud to be, as she put it, a "grandmother of thirty abortions"? Of course, abortions have nothing in common with preventives. But the war situation has reversed and distorted the point of view of many young people. They are panicky, they act like any victim of blind mob psychology, where the individual loses his personality and judgment. The high birth rate is contagious, it has become an epidemic, an avalanche against which reason cannot fight. But these youngsters will regret their present conduct later.

Let no one forget—not even temporarily—that birth control is always desirable and necessary, both during wartime and in peacetime, and also, in the most ideal society.

65 WEST NINETY-FIFTH STREET

MALE STERILITY AFTER THE WAR*

ALFRED KOERNER

New York, N. Y.

The machine, the commerce, the science and the husbandry of the future wait upon the man of tomorrow. Without him, no progress is possible; without him, today is funereal. Whether he will be here tomorrow depends, however, on whether tomorrow's women will be able to give birth to tomorrow's children. Kenneth Walker, writing in the *British Encyclopedia of Medical Practice* (1), points out that ten percent of all marriages in both England and the United States are sterile.

Before we consider the phenomena associated with sterility it might be best to define it. Sterility may be said to be the failure to reproduce; it may be either absolute or temporary. It may involve the man or the woman or both. Here we are not particularly interested

in its detection or treatment. We are, however, vitally interested in the fact that it does occur, and how and why, so that we may be able to prevent it and its aftermath or alleviate the suffering with which it is associated.

It is remarkable that in the first world war, according to the reports of the Medical Department of the United States Army in the World War (vol. XI), among the men of the American Expeditionary Forces (based on reports of the surgeon general) there were only 171 wounds of the penis, 499 of the scrotum and 237 of the testicle. Deming (2), commenting on the A. E. F. records, states that there were only forty-three cases of wounds or injury of the urethra there recorded. He points out that wounds of the external genitals are common but are not particularly severe unless associated with bladder or urethral injuries.

It is absolutely astounding that the medical records

*Address delivered before the Division for Education in Heredity and Eugenics of the National Research Foundation for the Eugenic Alleviation of Sterility, Inc., Nesconset, L. I., October 5, 1943.

of the first world war contain no history record regarding sterility and few inquiries in regard to diseases or affections known or suspected of affecting fertility. How such an important consideration could have been entirely neglected it is difficult to say, when the entire nation depends on the event. Suffice it to say, however, that the omissions in the records of that war must not be repeated. Our present records should show and should be so set up as to show the history of every case of a disease known to cause sterility, either immediately or later.

It should be recalled here that there are a goodly number of conditions from mumps down that give rise to spermatogenic failure—mechanical, chemical or physiological impairment—a long time after the primary condition has been forgotten. A record must be kept of all such occurrences. This must of necessity include a chronicle of all fever-producing conditions (including venereal infections), all toxic states, chemical warfare injuries, glandular disturbances, severe exposures (such as frequently occur in concentration or prison camps, for example), dietary deficiencies (especially of vitamin E), and other nutritional disturbances such as may come from crop failure or destruction or any of the other misfortunes of a campaign. These may involve both military and civilian populations. Some authors (3) suggest that a history be taken of the occurrence of epididymitis, orchitis, injuries of the testicles, infection of the prostate, tuberculosis of the genital tract, strictures and syphilis. Walker (loc. cit.) maintains that diminished fertility in England is contributed to by imperfect nutrition (insufficient B and E vitamin, etc.)

Kilduffe (4) states that the destinies of mankind have often been altered by battle and conquest; but how often have the issue of a battle, the limits of a conquest, been decided by disease among the contestants! Disease and destiny—how closely they may be associated!

Hans Zinsser (5) in *Rats, Lice and History*, states that Herodotus in the eighth Book of his *History* tells that plague (possibly plague and dysentery) killed three hundred thousand out of an army of eight hundred thousand which Xerxes brought in his campaign against Greece, so severe a loss that he had to withdraw from the country.

In *Epidemics Resulting from Wars*, Prinzing cites the fact that the Plague of Athens (in 430-425 B.C.)—described by Thucydides—may have been bubonic plague, typhus, smallpox or typhoid. At any rate, it killed tens of thousands. It is pointed out that the advance of the Huns against Constantinople in 425 A.D. was stopped, not by the force of the opposing armies, but by an unknown plague of great severity. Pestilence killed one hundred thousand Crusaders before and after the conquest of Antioch (1097-1098). Typhus and bubonic plague killed large numbers during the Thirty Year War. Typhus killed whole battalions during Napoleon's time.

In the Civil War, four and a half times as many men died of disease as were killed in battle and three and a half times as many died of wounds. Vast numbers became ill of dysentery and typhoid in the Franco-Prussian War of 1870. In Tice's *Practice of Medicine* (vol. 4) it is stated that there were 450,000 cases of typhoid fever in World War I, and ten percent of the

patients died. It has been noticed that not infrequently this disease is associated with atrophy of the testicles and impaired fertility.

It has now been demonstrated beyond dispute that small doses of x ray will sterilize a man. Similarly an infective process anywhere in the body (Walker, loc. cit.), such as an attack of typhoid fever, pneumonia or even a severe throat infection, will often arrest sperm formation. Spermatogenic failure will also result from infection within the genitourinary tract. The greatest offender, of course, in these cases is gonorrhea, which forms scar tissue throughout its tract of healing. This scar tissue contracts and forms a constriction and block wherever it occurs. Vital areas of the genital system may be occluded through this blockage or through actual pasting together of opposing surfaces so that the passage of sperm through these points becomes impossible. Our Army and Navy are now routinely giving sulfathiazole to all men who have been exposed to gonorrhea. This procedure is credited with so reducing the incidence of gonorrhea that the services are able to boast of the lowest infection rate in the annals of military affairs. With the new treatment methods gonorrhea is controlled early, complications occur infrequently, and healing is apt not to result in scar formation and strictures.

Thus, gonorrhea in our armed forces will both be choked off at its inception and thwarted in its progress. It will not bear the same relative importance with us as to onset of sterility that it did in the first world war. However, it will still take the same large toll from the European and enemy combatants that it did in the past because their governments did not get the sulfa drugs and other new remedies. And in the case of those that did get them, their supplies long since have run out and they are not in a position to replenish them. Much of the work that will have to be done in this field in those countries after the war could thus have been avoided had those nations been far-sighted enough to furnish themselves with an adequate supply of this new addition to the marvels of the healing art.

Among the many other conditions which may cause spermatogenic failure are toxic states, glandular disturbances, dietary deficiency and local conditions. Chronic alcoholism has had a bad affect on the sperm-producing mechanism; lead depresses it (Walker, loc. cit.).

In our own practice a strikingly large number of sterile males gave a history of fever, such as typhus, suffered during World War I, which reduced their fertility or rendered them absolutely sterile. The grave part of it is that many of them were subsequently allowed to marry without being given any warning that they might be sterile. Many of these men became extremely morose when they learned the truth, finally sinking into various stages of depression; still others wound up in divorce courts.

It is, therefore, evident that our military records must be revised so as to include all these inquiries in the history taking. Thus the doctor can be on his guard and can use suitable measures in the treatment of the military man so affected. The service man has a right to expect, and we certainly owe it to him, to have attached to his military discharge a medical statement that he is or is not sterile. He should be required to present this certificate whenever requested.

This will not only prevent untold unhappy marriages due to ignorance of the fact, but will end the exposure of innocent women to operative procedures which they not only do not need but which are also worse than useless. It will put an end once and for all to the fable that all failures of conception must be the fault of the wife.

Of late, the viciousness of certain combatants—principally the Nazis—has added the atrocity of castration as a punishment to the hazards that men must hurdle during wartime. The number of these unfortunates has not been inconsiderable, and, in large measure, adds to our postwar problems.

It is, of course, obvious that the type, location and extent of the wounds received will determine whether or not sterility will follow. Georges Luys (6), states that wounds of the penis penetrating into the rectum are rebellious to treatment. With the advent of the newer medicaments, such as the sulfa products, penicillin, gramicidin and other products, many of these conditions should now be much easier to control. Luys points out that lesions of the testicle are frequently associated with those of the urethra and cautions that treatment must be conservative and that castration is only permitted as a last resort, inasmuch as war is an activity which principally involves young men. He emphasizes the fact that profound disturbances of a general character frequently follow wounds of the testicle which are associated with atrophy thereof. These are exhibited as neurasthenia, depression, etc.

In *Surgery of Modern Warfare*, Hamilton Bailey (7) warns us to expect more urethral wounds from this war than formerly because most modern explosive weapons (such as land mines, marine torpedoes and bombs) tend to wound from below. This important observation should make the doctor practicing in war zones most cautious. However, these wounds are apt to be overlooked until complications set in because the wound is frequently associated with other wounds elsewhere and these other wounds occupy our principal attention. The wound of entry may be in the buttock, the abdomen or the thigh—all a good distance from the urethra. Bailey states that one-third of the wounds of the deep urethra are complicated by fracture of the pelvis. As Young has pointed out, sterility may arise from occlusion of the ejaculatory ducts in injuries of the deep urethra.

We are now doing the operation devised by Hagner by which the tubules of the testicle closed by venereal disease or other cause can be short-circuited so that the sperm formerly imprisoned at the point of blockage can be released and fertility restored. In a recent communication to the author, Dr. Oswald Lowsley reported twenty to twenty-five percent successes with this method.

With this terrific upheaval destroying the flower of our manhood, what will be the situation after the war is over? In past wars, though casualties have been high, sterility remained unconsidered. We know, however, that thousands of these men must have been affected. Remembering Bailey's caution (loc. cit.), it would seem that we have to look forward to at least one-quarter more of such cases.

The global nature of this conflict has created many problems, not the least of which is the decrease in male population in all countries involved. In times of peace

the usual ratio of male to female population is 106 to 100. This ratio has permitted normal growth in population, and it seems salutary to maintain this male preponderance. Now, with an American Army of about ten million men of whom only about one million can have access to their wives, we might consider the male to female ratio of reproductive ages as having been reduced to about 89 to 100. R. M. Titmuss (8), writing in the *Eugenic Review*, mentions a letter to the *British Medical Journal* by Dr. Percy Stocks in which it is stated that the war has temporarily reduced reproduction but has increased the number of young married women, and so makes possible a substantial rise in the reproductive rate when the war ends. If we estimate that about eight out of every ten males will return to us sexually intact after the war, the ratio stated above will roughly approximate 100 to 100. It therefore becomes evident that one of our principal problems will be to restore the peacetime balance of the sexes. Although the natural reproductive trend tends to effect this stabilization, we can hasten the process considerably by working toward improved fertility. The world, nursing its wounds, must be spared the additional misery of sterile marriages as far as is humanly possible.

Another problem will be to take up the reproductive lag, which will probably occur after this conflict has ended, due in specific cases to lack of funds, the events of demobilization, the sacrifice of marriage to career, and other uncertainties in the social field.

Finally, it will be necessary to restore the decimated population of war-ravaged countries—a job of huge proportions.

The treatment of male sterility, either absolute or temporary, is not the subject of this paper. It is enough to say, however, that neither medical nor surgical treatment of male sterility has yielded brilliant results. The only real treatment of infertility in couples has been through artificial insemination of the wife.

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53 EAST NINETY-SIXTH STREET

Blind Factory Workers in England

Opportunities for blind workers are expanding in England with over eighty occupations listed with the Ministry of Labor and National Service. In the last year over seven hundred men and women have been placed in jobs formerly done by sighted workers. Unusual powers of concentration and supersensitive hearing and touch have made it possible for many to do intricate assembly work, though for the most part the blind are given simple process work for which little preliminary training is needed. The blind factory worker has proved more than ordinarily careful so that the risk of accident is considered negligible.

THE ROLE OF PHYSICAL THERAPY DURING AND AFTER THE WAR*

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The rôle which physical therapy has assumed during the present conflict and will continue to play after the war is over is of immense importance, because of its tremendous progress achieved in only a few decades and its established value as a therapeutic agent.

During the past four to five decades, the period during which I have been privileged to practice my profession, many marvelous discoveries have been made which have revolutionized the science of medicine. The discovery of x rays and their application in diagnosis and therapeutics constitute an epoch-making event in the history of medicine; the introduction of many invaluable new diagnostic methods has greatly facilitated the correct diagnosis of disease; the addition to our armamentarium of many helpful modern drugs, such as the sulfa products, penicillin and the synthetic vitamins, to mention only a few of the latest, has enabled the clinician to treat effectively a variety of diseases formerly considered hopeless or incurable. The synthesis lately of numerous complicated drugs and endocrines, now permits greater scope for their application in the therapy of endocrine and other disorders. Numerous other innovations were introduced in medicine during this period, too many even to be mentioned, and all these, together with the exceptional progress made in surgery of every organ in the human body and the great skill of most of our surgeons, have greatly advanced the practice of medicine and brought it to the high standard we know today. They constitute the means now at our disposal to afford relief to the ill and the injured, whether on the battlefields or on the home front; they are of inestimable value in saving lives and relieving suffering everywhere and at all times.

Physical therapy today also plays no small rôle in medicine. It is particularly helpful in hastening the recovery, recuperation and rehabilitation of our maimed and injured soldiers and civilians, here and abroad. It also has made tremendous progress during the same past four or five decades, because of the great advance made during this period in physics, which led to the discovery of the various modalities of physical therapy with their physiological effects upon the human organism and their application in various disorders. The constant improvement in apparatus and the invention of new devices has also greatly hastened the progress and usefulness of physical therapy, so that today it constitutes a most important branch in therapeutics.

Physical therapy is not a new idea, not an innovation; it has been known and used almost as long as man has been in existence. The primitive man in the distant past, of the lowest known cultural level, knew of the helpfulness of heat and cold, of rubbing and bathing, of mineral waters in the relief of his ills, for he utilized these constantly, even in bringing up his young to develop their bodies so that they might be enabled to maintain their wild life and existence. In Greece and Rome, centuries ago, physical therapy in the form of bathing, gymnastics, massage, etc., was practised most extensively and utilized for the develop-

ment of strong bodies, as well as in disease. The temples of Æsculapius in charge of priests were functioning as healing centers and were practically genuine sanatoria; the public baths of the Roman settlements provided for gymnastics and self-entertainment; the mineral waters and hot springs were utilized almost constantly. Later, ever since the seventeenth century, throughout Europe and especially in Germany, physical therapy played an important part in medicine, and hydrotherapy was considered practically a panacea for a wide variety of disorders.

In the United States, before the last world war, physical therapy was little understood and practiced by only a few. Since then, however, it has made tremendous strides, perhaps greater progress than in any other country, because during the last war, as is the case in our present one, vast numbers of injured soldiers were brought back from every fighting front; this afforded the medical profession an opportunity to be brought into contact with physical therapy, to study its effects and thus realize its value. This particular type of therapy was utilized because of the powerful motive to restore to health the disabled men and return them into service in the best possible form and with a minimum of delay, which was possible mostly through the aid of physical therapy; for this reason our government also made every effort, economic and other, to provide such therapy, and to make possible such quick rehabilitation of the fighting forces. Furthermore, the marvelous results then achieved in the various military hospitals and other places, during and after the war, served to awaken the medical profession to the desirability of employing physical therapy also for the civilian population. Besides, numerous previously uninterested physicians began to study this subject and many even became specialists; and finally, numerous physiotherapy departments were established in hospitals and other institutions throughout the country, which promoted the extensive use of physical therapy. Today, physical therapy is recognized in the United States as a specialty in medicine, and its usefulness fully established all over.

The reason physical therapy is so effective in numerous disorders is that it enjoys certain attributes not possessed by medication or other procedures. It is, of course, impossible here to relate the numerous physiological responses of the various modalities of physical therapy, except perhaps to mention a few, but the fact that physical therapy is a most valuable adjunct in therapeutics is well established.

Therefore, in restoring a diseased organ to a normal state it is our duty to utilize the various physical therapy modalities at our command which are known to be effective in that particular disorder, whether it be heat, cold or bathing, ultraviolet radiation or infrared light, exercise or massage, active or passive motion, diathermy or high frequency current, as all these are helpful in appropriate instances if scientifically applied. The disorders in which these measures are applicable are quite numerous, as those affecting the locomotive system, such as sprains, dislocations, fractures, myosi-

*Read at a meeting of the International and Spanish Speaking Association of Physicians, New York, November 19, 1943.

tis, fibrositis, bursitis, arthritis, hip joint disease, sacroiliac disease and painful feet; or disorders of the nervous system, as neurasthenia, psychoses, neuroses, paralysis, neurocirculatory asthenia, and peripheral nerve injuries; also traumata, as contusions, burns, injuries, ulcerations and scars. All these are everyday occurrences during this terrific and most inhuman warfare with its exigencies at each moment. It is, therefore, incumbent upon every medical man, whether internist, surgeon, therapist or other specialist, to help everybody; not only every soldier disabled on the fighting fronts, but also the large population in our factories now occupied throughout our land in preparing the material with which the war may be successfully terminated. We must utilize every means at our command to shorten the duration of an illness of every person, factory worker or soldier, to lessen their disabilities and to rehabilitate them, and thus promote health nationally.

All such human derelicts, whether in our fighting forces, in home defense or industry, can often be helped by the use of physical therapy in addition to other measures, with restoration of function, relief of pain and a return to everyday usefulness. Just as we must aim to restore the fighting man in the shortest possible time for action on the firing line, it is just as important to rehabilitate the one behind the firing line as quickly as possible, so that he can resume his duties at the earliest possible moment, perhaps in a war plant or other industrial organization. With the help of the various physical therapy modalities such states as passive hyperemia and muscular atrophy may be overcome; a better blood supply may be delivered to the injured part, atrophy of muscles and adhesions prevented, the absorption of extravasated fluids promoted and various functions restored. If a correct diagnosis is carefully made and first measures, such as gentle massage, short cold applications, elastic bandaging and strapping, thermal applications as heat, radiant heat, baths, and short wave diathermy, are followed by such mechanical therapy as deep massage, active and passive motion, exercises, electrical stimulation of muscles, drugs in muscular atrophy and resistive exercises employed, many of the abnormalities previously mentioned may be overcome.

Rehabilitation and Occupational Therapy

As to the problem of rehabilitation, whether physical, mental or economic, this is no simple matter, neither during the present war nor after. The purpose of rehabilitation is to restore the disabled from whatever cause in the shortest possible time to a state of complete usefulness; this can only be accomplished through certain well planned and proved measures, under the management of those thoroughly skilled in such work. It must begin while the patient is still bedridden and include every type of therapy, physical and occupational, and later, where necessary, vocational education. There are, it is stated, in our country over eight million people physically disabled or incapacitated in one way or another, some because of accidents in civilian life as from various automobile and home accidents, others from disease or congenital causes; but in addition many of these now are also the result of military and home front operation. It is estimated that almost fifty-five million people are now engaged in ci-

vilian labor, of which over seventeen million are women; and that a million people are injured yearly; these require medical attention or rehabilitation in one way or another so as to remain useful and self-supporting. This, indeed, is an enormous task, but when the war is over and thousands upon thousands of additional maimed, injured and crippled are brought back to our shores, the situation will be much worse and more complicated, particularly because the present program concerning physical therapy seems wholly inadequate for such a situation.

There are now, we are informed, about one hundred and forty army general hospitals in the United States and about thirty-five abroad, all of which require the assistance of those trained in physical therapy; in addition to this, the Navy, the Veterans Administration, the Public Health Service, the civilian hospitals and other organizations also demand such services; but even now there is a great shortage of physicians experienced in physical therapy, and therefore hundreds are in demand for training to become competent to meet every possible emergency and difficulty. Furthermore, there are not enough physical therapy and occupational technicians, male or female, to assist the physiotherapy specialists in their work. It is evident, therefore, that an attractive program to encourage qualified persons to train for such services must be quickly established. It is also well known that at present there are not enough hospitals sufficiently equipped with physical therapy departments where proper therapy may be administered to meet present and future demands; adequate facilities are essential in peacetime, but in wartime the need is urgent. There is also a definite lack of facilities for occupational therapy for either the military or the civilian population. The government is conscious of these important facts and making every effort to correct the defects and provide for proper personnel and necessary facilities.

In the sphere of the civilian war worker there are also other psychic problems which are important enough to be overcome. Such ideas as that a disabled worker is less efficient and more prone to accidents than the one physically normal are detrimental to manpower output, for this is not always true. A perfectly normal individual, if improperly matched to a job, physically or temperamentally, is just as much subject to accidents as the one who is handicapped, but correctly suited to a position in accordance with his incapacity and capabilities. Now, when all must be making every effort to help win the war, we must endeavor to make every person most helpful, whether healthy or handicapped. Medical men associated with industrial organizations should assist in the problem of selecting proper workers, whether handicapped or normal, for jobs which suit their physical state as well as their temperament. Where proper adjustment is made, and the right worker placed in a position where he can be most active and helpful, the problem of production could be solved. This will help our boys abroad in their arduous task of winning the war with less sacrifices.

We are all well aware that the present conflict is the most horrible one in the history of the world. Many of us have sons or close relatives in the war; perhaps many of these will come back safe and sane, but many others may not; many may return broken in health or mind, and will certainly deserve the best of medical care and

rapid restitution to health and rehabilitation. We also most certainly wish to provide for them after their return the best possible future, with employment in accordance with their abilities and physical state. They must be afforded every chance of participating in and enjoying the fruits of victory; we must therefore make every effort to prepare for them most favorable situations.

In conclusion, may I be permitted to emphasize again that physical therapy constitutes an important agent

with which we may hope to accomplish a great deal for our boys, for treatment of the injured, whether on the battlefield or in the workshop, may not end even with the best of surgical or medical attention. Rehabilitation, and where necessary occupational therapy, must follow, in order to assure the injured a useful career for the rest of his life. In all these physical therapy must and will play an important rôle, now, during the war, and after.

867 ST. MARKS AVENUE

THE TIME FACTOR IN WAR EMERGENCY SURGERY

*Description of a portable Miniature Operating Theater for Use on the Battlefield**

GEORGE RICHMOND

Brooklyn, N. Y.

Introduction

In these days of sea, land, and air activities involving both hemispheres and extending from the Arctic to the Antarctic, time with efficiency plays an important part in the removal of the patient and the repair of injuries sustained from high velocity projectiles and in other war hazards confronting not only the armed forces, but also the civilian population. An understanding of the fundamental relationship of the damage caused by the modern missile can be calculated from the following formula: Energy = $\frac{\text{mass} \times \text{velocity}^2}{2}$ when applied to the striking force of the modern bullet or shell shrapnel" (1). This explains the great velocity and brutal destructive power of the modern missile when the calculated initial velocity is found to be 2,900 feet per second.

We have also seen new devices initiated prior to this international unrest, based on carefully laid, preconceived physical laws relating to "velocity" in inflicting its destructive power. Yet, these destructive powers had to be modified to suit conditions resulting from air-raids and blackouts, and even to be modified for new unforeseen conditions arising from irritant poisonous chemicals devised to ravage civilization, unprecedented in the first world war. By these destructive methods I mean war gases. "The likelihood of poison gases, so-called, being used in the present stage of this war is difficult to forecast. It is significant that Germany before her annexation of Czechoslovakia produced 145,000 tons of such chemicals" (2). That was several years before the attack on Pearl Harbor. Subsequently, with the great advancement in the speed of modern aircraft the vesicants, mustard gas or lewisite, can be sprayed over a large area on a grand scale, causing contamination, with its numerous sequelæ. In spite of treatment, vesicant wounds become dangerous and septic; for "like mustard gas, lewisite will attack any part of the body exposed to it" (3). It must be stressed here that "gases and vapors, being in the molecular state, can find access to all parts of the respiratory tract, and it is possible that those with a high diffusion rate can find their way into the nasal sinuses" (4), and thus the danger of war gases will be superadded to the existing wounds. These future complications will require the wearing of antigas clothing, which will soon drench first aiders with sweat.

It must be added further that war wounds sometimes become dangerous without exposure to war gases and in spite of all first aid treatment, because one is handicapped in giving treatment in the darkness. In dark atmospheric surroundings one is confronted with filth, the accidental contamination of dressings, débris, and the difficulties arising from treating several hundred casualties all at once. More frequently the clinical picture of war casualties reveals plurivisceral damage of several large anatomical regions, in which, surprisingly enough, the victims recovered with treatment administered by the casualty clearing surgeon. Lord Horder pointed out that "it is quite impossible to say in how many of the cases the microbe is present in the secondary lesions, but it is probably a true view to take that in this series of cases there exists every transition from a simple toxemia to a low-grade pyemia. In the great majority of cases blood cultures are sterile, but this does not, of course, exclude the occasional passage of the causative microbe into the circulation" (5).

Furthermore, we have even seen that "new situations in Britain due to enemy action have even required rejection and curtailment of some of the prewar carefully accepted methods of treatment. The trial and error type of treatment has brought forth new methods and novel devices" (6) in the treatment of chest injuries, abdominal injuries with protruding organs, and severe head injuries; also in the treatment of the gruesome facial injuries sustained from shrapnel, butterfly bombs, hand grenades, or from Commando raids. Professor Harvey Jackson (1940) reminds us that "scientific progress brings forth new methods of destruction, which are revealed in the nature of the injuries sustained from present-day instruments of warfare, in particular in the injuries resulting from aerial bombardment" (7). According to Gordon Gordon-Taylor "multiple wounds characterize modern bomb injuries, and in the case of victims of the so-called 'liquid air' bomb, the cutaneous wounds are very small, and quite out of proportion to the internal damage produced by the small scale-like particle into which the bomb-casing is split" (8). Subsequently, the external damage may be less than the actual internal damage. Thus, these injuries from "blockbusters" require that there should be on hand all equipment, including light, necessary for any emergency operation to be performed "on the spot". In addition to the time element involved, a well equipped suitable set,

*A detailed description of this apparatus will appear in a later issue.

with all material placed in handy partitions, is necessary, in order to give promise of being valuable in the application of surgical aid when the surgeon is confronted with plurivisceral anatomical wounds. Courage and quick skill are demanded of the operator working under deadly high velocity explosive missiles which explode with colossal destructive force.

Hence, it is for the purpose of speeding the application of efficient treatment to the wounded, whether the injuries were received below the sea, above the sea, or in the air, that this article is written. It synchronizes a fundamental relationship between a new method in handling with speed the repair of injuries arising in emergencies, not only from machine guns, light tommy guns, parangs, dum-dum bullets, hand grenades, or six-barreled rocket cannons, but also those arising from shell fragments or penetrations of the chest or abdomen with high velocity missiles, resulting in severe infections and sometimes with loss of life. This article does not purport to be a compendium of everything on the subject relating to the pathological anatomy of unscrupulous militarism of man towards man, but tends to symbolize courage and the new ideals which require the skill and judgment of the surgeon under all conditions of warfare. For, "if you make a point of trying to discover an explanation for the different clinical phenomena which come before you, if you refuse to allow yourselves to rest content with a bare knowledge of the facts, you will become better prepared and you will easily and readily acquire a genuine knowledge of the subject that you have in mind" (9), working under unbearable conditions, with the endurance to carry on and the keen awareness of responsibility in our hands—the highly significant quality—"life." Yet, "within the framework of these principles there are variations of opinion on the actual practice, on the details of technique, but such differences may be regarded as competitive in an effort to fulfill more adequately the requirements of the principle" (10). This principle must be judged in each individual victim, whether to risk operative treatment for a hand or a foot, or to assist nature with its vital mechanism of defense by attacking the organisms locally, or to excise a recent wound. Thus, it will be realized that in addition to opinions and the proper principle to be followed, one requires adequate material to be handy at the time of reaching the casualties, for the essentials of treatment to be administered on the appropriate basis. We must now consider the importance of a handy compact miniature operating theater which can be properly used for the various techniques of treatment to lessen the unjustifiable risks of uncertainty; or, with the elapse of time, increasing sepsis and lack of the vital mechanism of nature's defense plus pain aggravated by the wounds.

My interest in devising this "portable miniature operating theater" first arose from my experiences and recent association with a Medical Mobile Unit, A.R.P., in London, during this war. It was by comparison with other units, not only in first aid on the spot, but from comparison and realization, that my ideas of a handy compact "miniature operating theater" to be ready in a short time after the injury was sustained or the wound inflicted, would be welcomed. At the same time there came into my mind in addition to the "portable miniature operating theatre" and "immobilizing bandage" (to be described at a future date), the need for other

new ingenious fabricated gadgets to be suitable for speed in treating wounds inflicted by modern warfare.

It is now apparent that "a man may be wounded in more than one dangerous area of his body" (11) requiring surgical skill and all necessities handy, compact, and ready for application in a short time, while speeding the treatment of other victims simultaneously with amazing rapidity.

Moreover, these heroic men are all anxious for treatment and a chance to live, with that intangible highly significant quality known as morale in spite of being drenched with blood. They look to the operator to apply his skill and they endure their suffering and assist him in spite of their injuries. With the realization that treatment is being administered the patient's anxiety is relieved. Henceforth, the possibility of secondary wound shock is lessened following "severe vagal effects" (12). In addition, his courage, his spontaneity, and his keenness of nerve are heightened to defy the despotism menacing both hemispheres.

However, the confronting hazardous conditions have curtailed carefully laid plans to apply surgical aid and treatment at the proper time and under ideal surgical conditions. Efficiency and time-saving in the early treatment of wounds have taken a long step forward since the early days of the first air-raids over Great Britain. Consequently, I believe that a new compact miniature operating theater for the handy application of suturing material, with all the requirements on hand to be placed at the disposal of the operator, would be greatly welcomed at this time by the doctor working under hazardous conditions unknown in the last war. "Nevertheless, we must realize the ever-present danger of distraction if we are to counteract it. If it is ignored, it will constitute one of the most serious defects in the treatment" (13). It will constitute loss of time, and with loss of time in the treatment of casualties, loss of life will result.

Methods to prevent loss of life in the fires of war, we find, were practiced by the early Egyptians and the Greeks in their heyday; and we even find the Jews had sound beliefs in the treatment of life's ills with supernatural things. It may be further pointed out that since the early days of the measured cadences of the ancient Sanskrit, or since the "plague of Thucydides", or the writings of Hippocrates, or from the knowledge of Boccaccio or from Fracastorius, men have tried to prevent loss of life and have tried to acquire knowledge and thus give to the world new ideals of culture and bring forth new revolutionary ideas based upon sound facts of logic. These facts of logic will ripen on the "tree of experience" under all war conditions and pave the way for medical progress to relieve suffering.

The necessity for a handy, compact set, ready for administering aid to the wounded will be seen. Henceforth, changes for any additional item to be placed into the set will come with amazing rapidity when once the actual trial of flame and smoke has demonstrated its practicality. In addition, this handy miniature operating theater would assist the victim in securing proper surgical treatment "on the spot" before he can be removed to a field or base hospital.

To recapitulate: It is an ideal plan for placing at the disposal of the operator for an emergency operation all required material, with suitable lighting equipment and suturing apparatus. Besides, there are placed into

this compact medical arsenal set all suitable and selected necessities required not only in the present war, but also "under new unforeseen circumstances and different conditions" (14) affecting the future theaters of warfare. Furthermore, these miniature operating sets can be rapidly flown to any place where it is needed.

A résumé of the subject from a practical point of view is as follows:

First: The miniature operating theater should be compact and suitable for the purpose. Since time is the most important factor, time is a virtue in sepsis in wounds. "One has always to remember there are two factors to be considered in this problem of focal infection, namely, (a) the site of infection with its local signs and symptoms, and (b) the type of infection. The latter is usually the more important factor" (15). Hence, if proper attention is given to (a), the type of infection can be lessened and thus more easily overcome.

Second: Suitable beneficial effects of light should be present to assist the operator without revealing light to the enemy to be seen either above or below eye-level. The light should be so constructed as to shine downward, or be made to shine promptly downwards in a dramatic emergency if necessary. That is to say, especially where abdominal injuries are present, associated particularly with protruding organs or with severe nausea and vomiting; where "it is necessary to examine the tongue, tonsils and teeth" (16); in the treatment of psychogenic patients or pain of ischemic origin; also for the prevention of secondary wound shock and sepsis. Rear Admiral Cecil Wakeley (1940) noted that "the time factor is a most important one in abdominal injuries and every effort should be made to get the man to a casualty clearing station with all speed" (17) where clinical judgment may be checked under more suitable conditions and proper treatment administered at once, in addition to treatment given in the field by heroic Medical Service men, who have mastered especially suitable techniques in protecting the soldiers. These heroic men have written one of the proudest chapters in our military history.

Third: It is ideal in construction, so that "the great magic", morphine, which spells the ease of pain, therapeutic drugs, dressings, etc., can be obtained in a hurry, without contamination. It is necessary to "render first aid where he lies" (17) and to consider the time factor in addition to efficiency, when time plays such an important part in lessening the danger of complications from unforeseen dangers. Equally important, it may be stated "as regards time, is the aim to operate before the bacteria which at first are lying superficially on the walls of the wound have multiplied and grown into the underlying tissues" (18).

Fourth: Speed in treatment and in the removal of the patient is the underlying aim of this compact set, whether he is a bomb fragment victim or is suffering from hemorrhage, or the "diminution of the blood supply to the wounded area is an important predisposing factor in the development of gas gangrene" (19). Furthermore, factors predisposing to the dangers of slight superficial wounds, with serious damage underneath to muscles or nerves or to other

important underlying tissues, depend a great deal on the velocity of the projectile. Hence, a compact and well equipped set must of necessity be ready to treat not only the above mentioned complications, but also to treat lacerated or crushing wounds and severe hemorrhage accompanied by shock. These "miniature operating theater sets" are the ideal construction for an appliance for the treatment of such complications. Besides, speed also plays its part in the rapid removal of injured victims if war gases should be used in the future. Although up to the moment there have been no large gas attacks, the future has unforeseen possibilities, for "one of the best books on chemical warfare has been written by Sartori of Milan" (20).

Fifth: These "miniature operating theater sets" can be set up in a hurry when a condition requiring the treatment of sepsis is presented. Of course, realizing that "in addition steps must be taken to conserve if possible the vitality of the part supplied through the damaged trunk at any rate until the by the damaged vessel and for this reason any operation which is designed to conserve the flow of blood collateral circulation is established is worthy of consideration" (21).

If this method of helping, by means of overcoming the time factor in war emergency surgery, to simplify and speed treatment and assistance to the gallant injured, and in particular in lightening the burden of the heroic medical officers, who symbolize our inherent courage and carry the responsibility of preserving life under hazardous conditions, its purpose will have been realized.

Conclusions

1. This new method of time saving by the use of a miniature operating theater can be utilized in any situation by adding other instruments, dressings, lotions, solutions, and preventive and curative medicines before carrying the set to a suitable location.

2. The set is simple and compact in construction and contains space for all necessities in all theaters of war.

3. It will, I believe, prove its usefulness in time of an emergency and where time plays an important part in the utilization of effort on the spot.

4. It is light in weight, handy to carry, and can be worn in a knapsack pocket on one's back.

5. These sets can be turned out in mass production where they can be shipped to all parts of the globe with suitable articles placed into the compartments containing the necessities for that particular theater of war.

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(Complete list of references will appear in author's reprints)

Editorials

War Medicine

In this issue of the *MEDICAL RECORD*, we are presenting to our readers some interesting papers on work that has been done in the field of war medicine and surgery. We feel it is of real importance to bring to our readers as much information as possible on this timely subject. Of course, we would be much happier about the whole thing if we could devote our space to the advancement of medical science that would not have its principal accent on war, but we are in this war—a war not of our seeking—and without doubt the most important conflict that this or any other nation has ever engaged in, and we must seek to make known every development that will be of value to our wounded men.

We know from past experience it is not alone the immediate care that many of our wounded men require but they will require much medical aid and attention long after hostilities have ceased; furthermore, we feel it is well to emphasize that many of the lessons learned in war medicine and surgery will be of great value in our world of peace. It is also well to remember that the casualties of industry are high—much too high. In the past few years the casualties of our peacetime living have been greater than those of the present war. We, therefore, urge our readers to try and keep abreast of the findings of war medicine and surgery even though they may not be directly implicated in the conflict, for we are certain that they will prove of value in every physician's practice from day to day.

Healing Springs and Modern Spas

Water and waters have been used as remedial agents since the days of Hippocrates; indeed, they date to remote antiquity.

It is known that the ancient Greeks practiced the use of baths and it may be stated that Asclepiades of Bithynia (124 B.C.) introduced general hydrotherapy. In the days of Hippocrates the value of baths for therapeutic purposes was recognized.

Healing springs have been known from time immemorial. Pagans and Christians used such waters as a means of getting rid of, or at least modifying, certain diseases and affections. The primitive man sensed by intuition that the water from some springs relieved symptoms. The North American Indian in a similar manner recognized that it was essential to good health to keep the skin, bowels and kidneys open and to attain this object turned to the geyser, the warm spring and sweat oven.

It is largely to the Romans, whose physicians, by the way, were mostly Greeks, that is owing the appli-

cation of baths and the drinking of mineral waters for remedial ends. From the voluminous accounts in the *Natural History of Pliny the Elder* it is learned that springs abounded throughout the length and breadth of the Roman Empire. However, with the breakup of Roman civilization, medical science shared in the general ruin of the arts and sciences and knowledge of baths and bathing became only a tradition. With the advent of Christianity baths and bathing took on a different aspect. The healing wells under the auspices of the church became holy wells, some of which had medicinal properties when used for diseases or complaints for which their chemical ingredients were suitable, others were merely ordinary water. Here it may be interpolated in balneology, as in all medical treatments, the personal equation plays a great part. If the sufferer believed that the waters of a spring blessed by the church would relieve his condition they probably would do so, especially if the disorder was of functional origin, and even if chronic, such treatment might be of some benefit.

However, at about the time of the Reformation in England, the value of balneology and other branches of medicine shared in a renewal of life, or rather perhaps a spirit of inquiry sprang up which attempted to delve into the secrets of nature. Forgotten springs and wells were studied and investigated. Hydrotherapy was popularized by Max Joseph Oertel and Vincenz Priessnitz (1799-1851) followed up by the Bavarian pastor, Kneipp, while Wilhelm Winternitz (1835-1917) wrote the best treatise of the day on the subject. In England, in 1697, Sir John Floyer published his enquiry into the use of cold baths but the greatest impetus was given to the matter by Richard Russell, who in 1752 drew attention to the health giving merits of sea bathing. In 1770 Dr. Donald Monro published a treatise on mineral waters, summarizing the knowledge of every European spa.

It is only within comparatively recent years that spa treatment reached its present scientific attitude. It is not an exact science but has forged ahead in a satisfactory manner. It may be stated that treatment at a well equipped spa and one where the waters, climate and treatment are adapted to the patient's form of disease or affection provides a valuable form of accessory treatment, scientific, not empirical.

Gas Gangrene

Research in gas gangrene has been carried on for a considerable time and satisfactory progress has been made. Up to 1914 the anaerobic bacteria responsible for this type of wound infection had been little studied. During the first world war the problem was investigated and by the end of the war a much clearer picture of the gas gangrene group had been obtained. After the war

research lagged and almost lapsed because research work on gas gangrene, unlike tetanus, could be pursued effectively only during the war. During recent years, however, there has been another opportunity to study this infection from the clinical aspect and the attention of research workers has been turned to the mode of action of chemotherapeutic substances. The object now is to discover how to prevent infection from gas gangrene, that is, by chemoprophylaxis. It is believed that chemoprophylaxis might prove to be as valuable as chemotherapy has been found to be in the treatment of this infection.

Serpents and Medicine

From the earliest days, serpents have been associated with medicine. Hence, Æsculapius has been embodied as a serpent from time immemorial, while the symbol still adorns many medical publications.

The serpent was regarded always as a source of low cunning and this trait was looked upon as wisdom by the ancients. The serpent was associated especially with fecundity and therefore with health, and this belief exists at the present time in Asiatic lands. For example, in India this power is thought to be transmitted to stone snakes and Naga, the snake god, is worshipped almost solely by women, but for physiological, not religious reasons. Such images are set up around the *nim* tree, also named the margosa, the bead tree, the holy tree, and also the pride of China. Once each year women bring offerings of milk, fruit and flowers to these stone images, which are credited with the power not only to induce fecundity but to cure sores and skin diseases. Although there is no doubt their healing powers are overrated, it is declared on good authority that they exert a beneficial therapeutic action. From the pulp of the *nim* tree an ointment is made which is of value in treating headaches of a certain type and is curative in scalp affections.

European folklore expatiates on snakes, which were often regarded as the secret guardian of children. Many curious tales are extant in this connection.

Again, it is widely believed that to eat snake meat is to acquire some of the magical power of the snake. There is a folklore belief that it transmits medical skill and to partake of its flesh was looked upon as a cure for many human ills and for the effects of its own venom. The venom of deadly snakes has been put to medical use recently, with satisfactory results, it is said. There is nothing new under the sun.

In connection with the treatment of snake poisoning, the *nim* tree again enters the picture. In Ahmadnagar, India, the leaves of the tree, bruised and impregnated to some extent with chitties, are administered, drums are beaten and a brush of *nim* branches passed over

the body of the sufferer from head to foot in order to disperse the poison.

In Asia, particularly in India, the belief in the healing power of serpents is still prevalent and also lingers in some parts of Europe. Truly, superstition dies hard, but it is well to remember that there is some truth in the tradition that snake venom has preventive and curative powers in certain conditions, and also bear in mind that in all diseases the mental state has an influence on the physical state, for good or evil, and that it is wise not to be too skeptical of matters which cannot always be explained scientifically.

News Items

Anniversary Discourse at the Academy.—The ninety-fourth anniversary discourse of the New York Academy of Medicine was given on Thursday evening, January 27th, by Charles Glen King, scientific director, Nutrition Foundation, Inc. His subject was "Food and Civilization".

Harvey Lecture.—The fourth lecture in the series presented by the Harvey Society in affiliation with the New York Academy of Medicine was given Thursday evening, January 20th, by Karl Paul Link, professor of biochemistry, Wisconsin Agricultural Experiment Station. His subject was "The Anticoagulant from Spoiled Sweet Clover Hay".

Clinical Society of Reconstruction Hospital.—At a meeting of this society held in New York on Wednesday evening, January 19th, several interesting cases of fractures and dislocations were presented by Dr. B. Bernard Kaye; Dr. George A. Glass; Dr. Henry H. Ritter, and Dr. David Goldblatt.

Annual Meeting of the American Medical Association.—It is announced that the American Medical Association will hold its annual meeting in Chicago, June 12th to 16th. The House of Delegates will meet in the Palmer House where the scientific exhibit and the opening general meeting will be held.

Hermann M. Biggs Memorial Lecture.—Dr. Wilbur A. Sawyer, director of the International Health Division of the Rockefeller Foundation, will deliver the annual Hermann M. Biggs lecture in Hosack Hall at the New York Academy of Medicine, on Thursday evening, April 6th. The subject of the lecture will be "International Health". These lectures are held under the auspices of the Committee on Public Health Relations of the Academy of Medicine and are open to the general public.

Awards in Tropical Medicine.—At the annual meeting of the American Society of Tropical Medicine, held in Chicago in November, the Theobald Smith Medal of the George Washington University School of Medicine was awarded to Colonel Charles F. Craig, U. S. Army, retired, for his contributions as a teacher, writer, and practitioner in the field of tropical medicine. The Bailey K. Ashford award of \$1,000 was given to Dr. Norman H. Topping, of the Public Health Service, stationed at the National Institute of Health, Bethesda, Md., for his investigations on typhus fever and Rocky Mountain spotted fever.

Friday Afternoon Lectures.—Lectures in this series to be given at the New York Academy of Medicine during March and April are as follows:

Dr. William P. Thompson: Hemorrhagic diseases, March 3d.

Dr. Franklin M. Hanger: Present day views of functional liver tests, March 10th.

Dr. Alvan L. Barach: Physiologically directed therapy in intractable asthma, March 17th.

Dr. Norman Jolliffe: Avitaminoses—diagnosis and principles of treatment, March 24th.

Dr. Howard C. Taylor, Jr.: Diagnosis and treatment of malignancy of pelvic organs, March 31st.

Dr. Milton Benjamin Rosenbluth: Practical management of hypertension, April 7th.

At the concluding lecture, to be given on April 14th, the most recent methods in the treatment of war wounds and surgical shock will be discussed.

New York Physical Therapy Society.—At a meeting of this society held Wednesday evening, February 2d, the scientific session consisted of a round table discussion. Dr. H. H. Jordan presented a paper on "Recent Advances in the Treatment of the Painful Frozen Shoulder", illustrated with lantern slides. Dr. J. R. Fried read by invitation a paper on "Roentgen Therapy". The discussion was opened by Dr. J. B. L'Episcopo by invitation.

Pediatrics and the War.—At a meeting of the Section of Pediatrics of the New York Academy of Medicine, held Thursday evening, February 10th, the subject for discussion was "Pediatrics and the War". Papers were read as follows: The emergency maternity and infant care program—a federal plan for aiding servicemen's families, by Dr. Leona Baumgartner; Effects of wartime conditions on infectious diseases of children, by Dr. Ernest L. Stebbins, and Juvenile delinquency and the war, by Dr. Dudley D. Schoenfeld. A general discussion followed.

Charles Mayer Fellowships at the Academy.—The Committee on Medical Education of the New York Academy of Medicine has awarded three of the four fellowships provided by Dr. Charles Mayer to Dr. Harry Goldblatt, Western Reserve University, Cleveland; the Cancer Research Laboratory of Mount Sinai Hospital, New York, and Dr. John R. Murlin, University of Rochester, N. Y. A fourth fellowship of \$2,000 for research on the study of the relationship between precancerous lesions of the mouth, hepatic insufficiency and gastrointestinal disorders will be held open for further applications until April 15, 1944. Applications should be sent to Dr. Mahlon Ashford, secretary of the committee, not later than April 1, 1944.

Urology Award.—The American Urological Association offers an annual award, not to exceed \$500, for an essay (or essays) on the result of some specific clinical or laboratory research in urology. The amount of the prize is based on the merits of the work presented, and if the Committee on Scientific Research deem none of the offerings worthy, no award will be made. Competitors are limited to residents in urology in recognized hospitals and to urologists who have been in such specific practice for not more than five years. All who are interested should write to the Secretary for full particulars. Essays must be in the hands of the secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tennessee, on or before March 15, 1944.

Medical History of the War.—Members of the Museum and Medical Arts Service of the Army Medical Corps in the European theater of operations are compiling a medical history of the war, recording in photographs and drawings new surgical techniques and unusual treatments of disease, according to *J.A.M.A.*

Psychotherapy From the Practitioner's Standpoint.—At a stated meeting of the New York Academy of Medicine, held Thursday evening, February 3d, the program consisted of a discussion of indications for and the value of psychotherapy from the practitioner's standpoint. Dr. Franz G. Alexander, professor of psychiatry, University of Illinois College of Medicine, read a paper on the indications for psychoanalytic therapy, and Dr. S. Bernard Wortis, Lucius N. Littauer professor of psychiatry, New York University College of Medicine, read a paper on psychotherapy in general practice.

Pharmacy as a Public Health Profession.—Dr. Charles W. Ballard, dean of the College of Pharmacy of Columbia University, announces that Selective Service officials will recognize pharmacy as a public health profession when the activities center about filling prescriptions and the sale of medicinal merchandise in considering deferments, but they refuse to recognize other types of drugstore service as essential. This decision emphasizes the fact that pharmacy is not solely a service profession and that the sale of goods is an essential part of the pharmacist's duties, but very properly recognizes that the nature of this merchandise differentiates it from that sold in other retail outlets.

New York Heart Association.—A meeting of the New York Heart Association, a division of the New York Tuberculosis and Health Association, Inc., was held on Tuesday evening, February 1st. Dr. Edwin P. Maynard, Jr. presided. The program consisted of the following papers: Arrest of endocarditis by penicillin, by Dr. Ward J. McNeal and Dr. Charles A. Poindexter; Heart disorders in an Army General Hospital, by Dr. John T. King, chief of medical service, Walter Reed Hospital; Diagnosis of cardiovascular diseases in registrants for military service, by Dr. Robert L. Levy. These subjects were discussed by Dr. M. Henry Dawson, Dr. Arthur C. DeGraff, Dr. Clarence E. de la Chapelle, Dr. Bernard S. Oppenheimer, and Dr. Harold E. B. Pardee.

New England Society of Physical Medicine.—A symposium on the management of a cancer patient was presented by the New England Society of Physical Medicine at a meeting held on Wednesday, January 19th, with Dr. Herman A. Osgood as chairman. The following papers were read: "What Can and Should be Done Before and After the Operation", by Dr. Herman A. Osgood, radiologist, Lynn Hospital and Cancer Clinic; "Cancer in the Female with Particular Reference to the Breast and Pelvis", by Dr. Robert M. Green, associate professor of surgery, Harvard Medical School; "Electrosurgery of Accessible Growths", by Dr. William D. McFee, consultant in physical medicine to the U. S. Veterans Administration, and "Diet and Hygiene for the Cancer Patient", by Dr. J. Penteado Bill, associate in preventive medicine and public health, Boston University School of Medicine. A general discussion followed.

Yale Graduation Exercises.—The degree of Doctor of Medicine was conferred upon forty-nine students, including five women, at the Yale School of Medicine on December 18th. Commissions in the Army were given to twenty-two graduates, and Navy commissions were awarded to thirteen graduates. Certificates were awarded to two British students, who are required to return to England soon.

The Campbell Gold Medal was given to Donald W. Seldin, of Brooklyn, N. Y., with honorable mention to William K. Welch, of Pittsburgh, Pa. The Keese Prize, awarded to the student who presents the best thesis, was given to Charles W. Watson, of Tulsa, Okla., with honorable mention to John J. Milford, Jr., of Huntsville, Ala. James L. Bradley, of Lyons, N. Y., was awarded the Parker Prize for the graduating student who has shown during his course the best qualifications for a successful practitioner. The Ferris Prize in anatomy was divided among three students: Thomas A. Doe, of Linden, N. J.; James A. Kleeman, of Springfield, Ohio, and William J. Wedemeyer, Jr., of Upper Montclair, N. J. The Mendel Prize in physiological chemistry was given to Edward F. Edinger, Jr., of Bedford, Ind.

Planned Parenthood Federation Holds Annual Meeting.—The twenty-third annual meeting of the Planned Parenthood Federation of America, Inc., was held in New York, January 25th to 27th. The general subject for discussion was "Family Security—A Basis for World Security". Representatives from more than thirty-six state leagues and three hundred and fifty local planned parenthood committees throughout the country attended these wartime sessions of the Federation which were aimed at improved maternal and child health. At the dinner held on the evening of January 26th, authorities on population and postwar planning discussed the relationship between population trends and international stability. The general topic of these discussions was "Is Overpopulation a Threat to Permanent Peace?"

International Spanish Speaking Association of Physicians.—This association inaugurated its eighteenth season of scientific sessions on November 19th with a symposium on the psychic and social effects of this war. The speakers included Dr. Jacob Gutman; Dr. William Snow; Dr. B. Liber; Dr. R. M. Loewenstein; Captain K. E. Harshbarger; Dr. M. A. Bigelow, and Dr. F. Vallez.

At a meeting held on January 21st a symposium on the international postwar status of medicine and economics was presented at the scientific session. Among the speakers were Dr. Vladimir Lebedenko, Dr. Fernando De Los Rios, and Dr. W. G. Crump. At this meeting it was announced that His Excellency, the President of Chile had accepted honorary presidency of the association. The election of nineteen new members was also announced. In his presidential address, Dr. J. M. Gershberg gave an interesting account of the new chapters that he had recently formed during a recent trip to the coast in Juarez, Mex.; Tulsa, Okla.; Hollywood, Calif.; Phoenix, Ariz.; Manitou, Colo., and San Antonio, Tex.

A symposium of scientific, surgical, medical and war motion pictures in sound and color was presented at the 139th meeting of the Association, held on Friday evening, February 18th.

Personal.—Dr. K. E. Dowd, chief medical officer for the Canadian National Railways, has been made a Fellow of the American College of Surgeons. Dr. Dowd was also recently elected an Associate Fellow of the Aero Medical Association of the United States in recognition of his work in aviation medicine.

Dr. Walter A. Bloedorn, dean of George Washington Medical School, Washington, D. C., has been elected to succeed the late Dr. George W. Crile, of Cleveland, as a director of the Gorgas Memorial Institute of Tropical and Preventive Medicine, Inc.

Dr. Harry C. Solomon, clinical professor of psychiatry, has been appointed professor of psychiatry at Harvard Medical School and medical director of the Boston Psychopathic Hospital, succeeding the late Dr. C. Macfie Campbell.

Dr. Robert Wilson, dean of the Medical College of the State of South Carolina, Charleston, since 1908, and associated with the school since 1893, has resigned. He will be succeeded by Dr. Kenneth M. Lynch, who has been serving as assistant dean since 1935.

Dr. Alexander Simon, senior medical officer at St. Elizabeths Hospital, Washington, D. C., for a number of years, has been appointed assistant medical director of the Langley Porter Clinic for Mental Diseases.

Dr. Robert Denison, president of the Harrisburg (Pa.) Academy of Medicine, recently received the Seibert Memorial Prize of \$500. The award was established in memory of the late Dr. William Seibert and is given every two years to a member of the academy who has done notable work.

Dr. Robert A. Cooke was presented with the gold medal for outstanding contributions to clinical allergy at the sixth annual forum on allergy held in St. Louis, Mo., January 22d to 23d. Dr. Cooke delivered the fourth annual allergy forum lecture on "Observations on Allergic Reaction".

Dr. Thomas A. C. Rennie, of New York, has been named director of the new division of rehabilitation of the National Committee for Mental Hygiene.

Dr. Robert Chobot, of New York, has been named president of the newly formed Academy of Allergy.

Dr. Oswald T. Avery has been awarded life membership in the New York Academy of Sciences.

Dr. Henry E. Sigerist, director of the Institute of the History of Medicine, Johns Hopkins University, has been appointed editor of *The American Review of Soviet Medicine*, the official journal of the newly founded American-Soviet Medical Society.

Dr. J. Wallace Hurff has been elected president of St. Michael's Hospital, Newark, N. J.

Dr. Walter Timme, director of the neuroendocrinology department of the Neurological Institute of New York, and professor of clinical neurology at Columbia University College of Physicians and Surgeons, received one of the four Townsend Harris medals, awarded at the sixty-third annual alumni dinner at City College, on November 13th.

Dr. Frederick L. Hoffman, of San Diego, Calif., has been awarded the Clement Cleveland Medal which is given annually for outstanding service in the cause of cancer control. Dr. Hoffman, whose ideas led to the foundation of the American Society for the Control of Cancer thirty years ago, is an internationally known statistician, and formerly a vice-president of the Prudential Life Insurance Company.

Exophthalmic Goiter

(Continued from page 92)

weeks after treatment. An additional fourteen patients (twenty-eight percent), subjectively well, have now been back at their customary duties for more than a year and are approaching complete recovery. Of the remaining eight patients, under treatment for several months, six are progressing favorably toward normal, and two, with complicating diabetes mellitus, are only moderately improved. None of the series was hospitalized. From present indications it appears likely that at the termination of a follow-up period of sufficient duration, our statistical records will compare favorably with other modes of treatment of these patients.

Conclusions

1. The results of fifty cases of exophthalmic goiter treated with prostigmin bromide are reported. The average dose was one-half to one tablet (7.5 to fifteen mg.) given three times a day over a period of ten weeks, followed by gradual withdrawal of the drug.

2. In addition to prostigmin, the therapeutic regime included at least a ten hour stay in bed daily during the initial weeks of treatment, a high caloric diet, the administration of quinine or quinidine in selected cases, and minute doses of iodized calcium. A remedy for insomnia or digestive disturbances, the timely correction of discoverable infectious foci, and practical psychotherapy were additional measures which were employed in certain cases. Twenty-five cases similarly treated but without prostigmin served as controls.

3. Prostigmin seems to exert an especially favorable influence on the heart hurry and the exophthalmos.

4. Of this series, twenty-eight patients or fifty-six percent have now remained normal for more than three years; more than half of these individuals were well enough to resume their customary activities within several weeks of treatment. Fourteen of the series or twenty-eight percent have now been back at their customary duties for more than a year. Of the remaining eight patients, under observation for several months, six are progressing favorably, and two with complicating diabetes mellitus are only moderately improved. None of the patients was hospitalized.

5. It appears that prostigmin is a valuable asset in the medical management of exophthalmic goiter.

References

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2. BRAM, I.: *Exophthalmic Goiter*, p. 328, Mosby, 1936.
3. This exception must be noted: Occasionally in spontaneous or induced myxedema complicating or modifying the disease, the heart rate may be normal or below without recovery of the patient, since circulatory calm may mask a residual or potentially active Graves' syndrome.
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7. STAR, I. J.: Note on antagonism between cardiac action of acetyl-B-methylcholine and acetylcholine and that of quinidine. *J. Pharm. and Exp. Therap.* 56:77, 1936.
8. Experiences with several thousand cases of exophthalmic goiter over a period of thirty years have convinced me that treatment of this syndrome is an outstanding example of the practice of psychosomatic medicine.

1633 SPRUCE STREET

Book Reviews

Internal Medicine

Internal Medicine in General Practice. By ROBERT PRATT McCombs, Lieutenant, Medical Corps, U.S.N.R. On leave of absence from the staffs of the Pennsylvania and Abington Memorial Hospitals, and the Jefferson Medical College. Illustrated. Philadelphia and London: W. B. Saunders Company, 1943. Pp. 694. Price \$7.00.

This book was designed to bring some of the newer ideas concerning the diagnosis and treatment of the more commonly encountered diseases to physicians in their own communities, rather than having them attend the larger medical centers. During this teaching program the author came in contact with a large majority of the practitioners in the state and was impressed by the frequency and the similarity of certain misconceptions concerning points of fundamental importance. These were expressed either as questions at the many meetings of medical societies or during consultations. It became evident that many of these misconceptions could be attributed to failure on the part of physicians to grasp the full significance of some of the remarkable advances which have been made in the basic sciences during the past several years. Many of these physicians decried the lack of a text in which this basic knowledge was integrated with the clinical aspects of internal medicine in a brief but understandable manner. Because of a common tendency among physicians to think of their patients in terms of symptoms or some unusual physical or laboratory finding, the differential diagnostic implications of the more common clinical observations have been stressed, special emphasis being placed upon physiological aspects; and because of the limitations imposed upon general practitioners by lack of time and facilities, the means of making a diagnosis, with the minimum amount of laboratory and technical tests, and the importance of correctly chosen consultations have been pointed out in the hope of aiding physicians in the selection of cases for these specialized procedures.

Mayo Clinic Research

Collected Papers of the Mayo Clinic and the Mayo Foundation. Edited by RICHARD M. HEWITT, B.A., M.A., M.D.; A. B. NEVLING, M.D.; JOHN R. MINER, B.A., Sc.D.; JAMES R. ECKMAN, A.B., and M. KATHARINE SMITH, B.A. Volume 34. Philadelphia and London: W. B. Saunders Company, 1943. Pp. 999. Price \$11.00.

The medical profession of this country always welcomes the reports of the Mayo Clinic in the fields of clinical research, and this last edition, the thirty-fourth contains much that is new in the field of medicine and surgery. In these varied and collected papers we are certain that most physicians will find something that will be of vital interest to them. There are quite a few papers on the more recent work on the sulfonamides and on the less well-known product, promin, which seems to show some promise in the field of tuberculosis. The work on penicillin which has recently been done in the Mayo Clinic is not included in this volume. The section on the ductless glands does not contain anything that is new or startling but views that are of real interest. Of course, there are papers on anesthesia and other specialties. Practically all of them are well written and worth reading.

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FEBRUARY 1944

Medicolegal Notes

Coronary Thrombosis Held Caused by Disease, Not by Accident

Action was brought on an accident policy covering loss by "assault by burglars or highwaymen" and excluding loss from injuries resulting from "disease in any form". The insured, an office manager, was the victim of a holdup on January 31, 1930, after which he worked at his occupation, without consulting a physician, until the day of his death, March 3d following.

An autopsy disclosed a coronary thrombosis in the left anterior coronary artery and sclerosis of the coronary arteries. The physician who performed the autopsy testified that "he had never heard of a person continuing to work for a period of thirty days with a clot in the coronary artery without medical attention and rest, and that it would be unusual for one to do so. Furthermore, he testified that he had found no scar tissue in the heart when he performed the autopsy that would evidence the occurring of a thrombosis on January 31st".

Two medical experts, in answer to a hypothetical question, gave as their opinion that the insured's death was caused by a second thrombosis which occurred on the day of his death.

Affirming judgment for the defendant insurance

company, in the Federal District Court for Northern Illinois, the Seventh Circuit Court of Appeals, *Llewellyn vs. Commercial Casualty Ins. Co.*, 118 F. 2d 144, held that, even though there may have been a coronary thrombosis at the time of the holdup, it did not result in the death of insured, which was held to have been caused by the thrombosis which occurred on March 3d, so that no recovery could be had upon the policy.

Physical Examination of Plaintiff in Armed Forces, in Personal Injury Action

In a personal injury action it is no valid objection to a physical examination of the plaintiff before tried on the defendant's motion, that the plaintiff is now in the armed forces and not within the court's jurisdiction. Plaintiff can be examined at the place where he is stationed, if that fact can be disclosed. He may come to the court's jurisdiction on leave. To be afforded a physical examination near the time of the accident, when the injuries complained of were sustained, is a substantial right of the defendant.

An order was granted in such a case providing that the plaintiff, on coming into the jurisdiction, give defendant's attorney timely notice of his presence; also notice, subject to the rules of the armed forces, of his location or any change of location, so that defendant might elect to arrange for the examination at the place where plaintiff is now or will be stationed. *Heit v. Kessler*, New York Supreme Court, Special Term, Kings County, 41 N. Y. S. 2d 822.

Damages

In a personal injury action resulting from an automobile collision the following awards of damages were held not to be excessive: \$500 to a man put out of work for about a year, and making at the time of the accident \$5.15 a day. He sustained a broken pelvis, one bone in his left foot was broken; he was thirty days in the hospital and was obligated for a doctor's bill of \$127; \$150 to a man injured in his back, hips and left shoulder, who was confined to bed for two and a half months and had a \$12.50 hospital bill: \$400 to a woman bruised all over, with injuries to her left hip, lost seven jaw teeth and had doctor, hospital and ambulance bill aggregating \$72.50. *Philpott vs. Parham*, Illinois Appellate Court, 44 N. E. 2d 934.

Where the plaintiff in an action for personal injuries lost nothing in a financial way during the two months his wound was healing, an award of \$950 damages was disallowed so far as in excess of \$600 for pain, shock and suffering from slight flesh wounds and a fracture of the surgical neck of the right humerus which required immobilization of the shoulders; wearing and removing splints, rubbing with lotion, etc. *Buckalew vs. Brockner*, Louisiana Court of Appeals, 11 So. 2d 720.

Medical Examiner's Report as Evidence

A copy of the report of a local medical examiner which stated that the insured either fell or jumped from the roof of the apartment house in which he lived is not proof of accidental death in an action to recover double indemnity provided for in life policies for violent and accidental death of the insured. *Winter vs. New York Life Ins. Co.*, 260 App. Div. 676, 23 N. Y. S. 2d 759.

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—SWARTZ & REILLY, "Diagnosis and Treatment of Skin Diseases," p. 66



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Clinics at Yale for Inebriates

A diagnostic and guidance clinic for inebriates will be opened in New Haven this month, under the joint sponsorship of the Yale Laboratory of Applied Physiology and the Connecticut Prison Association, and a similar clinic will be opened at Hartford in the near future. The opening of these clinics has been aided by a large contribution to the Association by an anonymous Hartford donor. With the active participation of the Connecticut State Medical Society and religious and civic organizations, the clinics will deal with both the prevention and control of inebriety. Each clinic will be staffed by psychiatrists, a psychologist, a social worker, and a clerk, with representatives of Alcoholics Anonymous and the Salvation Army on call, and will work under the supervision of the director of the section on alcohol studies, the medical director of clinics, and a legal consultant. It was emphasized that the clinics will take advantage of the existing institutions of the state and serve as a clearing house for them, and that the present creation of an institution for the treatment of inebriates is not contemplated. Referral of patients to the clinics may be made by courts, welfare agencies, general hospitals, private practitioners, or appointments may be made directly by patients or by their relatives. Dr. Ralph Banay, psychiatric consultant of the New York State Parole Board, and formerly chief psychiatrist of Sing-Sing Prison, will be the medical director and will supervise both the New Haven and Hartford clinics, with Dr. Clements C. Fry as adviser. Dr. Howard W. Haggard will have general charge of the clinic program.

Inter-American Nurses Training Program

The training of additional personnel is under way in cooperation with eighteen other American republics, implementing a greater inter-American health and sanitation program. The United States is contributing funds and technical aid through the Institute of Inter-American Affairs.

One of the greatest handicaps to the development of public health activities is the lack of professionally trained nurses, particularly health nurses. To meet this need, the Bolivian Servicio is giving home nursing courses to women's groups interested in health problems, and practical nursing procedures are being taught in the maternity wards of some of the hospitals. Public health nursing courses are being given with United States nurses assisting.

In Brazil, United States nurses are helping in an advisory capacity. Hospitals in the Rio de Janeiro area are providing trainees with practice in medical and surgical nursing. Postgraduate instruction is also being given Brazilian nurses. Courses in practical nursing and the organization of a new nursing school in Sao Paulo, are among Brazil's activities.

Colombia and Ecuador are also organizing National Schools of Nursing, with financial aid from the Rockefeller Foundation, and the reorganization of schools of nursing, in both El Salvador and Costa Rica, is under way. Honduras has established a six months' course in practical nursing for home visits. Similar plans are also developing in Nicaragua, Paraguay and Peru.

Another phase of the inter-American program is a fellowship plan for postgraduate study. Seven nurses from Brazil, Bolivia and Peru hold one year nursing fellowships for study in the United States.

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Hypertension Treated by Sodium Sulfocyanate

Drew M. Petersen (*Jour. Missouri State Med. Assn.*, Sept. 1943) points out that while the salts of sulfocyanates (thiocyanates) have been used for many years in the treatment of hypertension and act as a depressor of the arterial blood supply, their actual mode of action is not clear. Recent investigators have shown that a small concentration of sulfocyanates is normally present in the blood and that patients with hypertension have a lower concentration than those with normal blood pressures. The safe level of concentration is accepted as 8 to 12 mg. percent with 20 mg. the danger level, producing definite toxic effects. Below that concentration symptoms usually do not occur. The dosage required to obtain satisfactory levels varies considerably. The kidneys are probably the only means of elimination, therefore, the dosages required will vary with the renal function. There are definite contraindications to the use of thiocyanate. They should not be given to patients with cerebral accidents, to the very old and debilitated, and those having severe kidney or coronary artery disease.

The author reports on the results obtained in treating thirty-three patients with essential hypertension. Relief of symptoms was regarded as good in fifty percent of the cases, fair in thirty-five percent, negligible in fifteen percent. A total of eighty-five percent obtained some relief from symptoms. Sixteen of the patients showed an average drop of from 30 to 50 mm. Hg. in systolic blood pressures and twenty-one had a drop of from 10 to 30 mm. Hg. in diastolic blood pressure. Patients over fifty tolerated the drug and responded as well as younger patients. Four cases of intoxication were found with symptoms of sleepiness,

weakness and hallucinations. Other reactions such as nausea and vomiting, drowsiness, weakness, loss of appetite and maculopapular dermatitis were seen.

The fall in blood pressure was found to be roughly proportional to the concentration of the drug in the blood. The blood concentration should be determined once a week, with the blood pressure preferably taken by the same individual under practically identical conditions. The dosages needed, while varying with the kidney function, started at 2.5 grains twice a day with later adjustment according to the blood concentrations. The drug used was a sodium salt of sulfocyanate, Haimased, which was furnished by the Tilden Pharmaceutical Co.

Peterson concluded that sulfocyanate (thiocyanate) is a valuable adjunct to the treatment of "essential" hypertension. Psychogenic factors must be considered and if possible ruled out. Intelligent cooperation of the patient is essential. The drug must be discontinued with the first signs of toxicity and the distinction borne in mind between symptoms due to toxicity and those due to excessive fall in blood pressure. Patients should not be kept on the drug longer than three or four months without an intervening rest period of one or two months.

A Useful Laboratory Aid

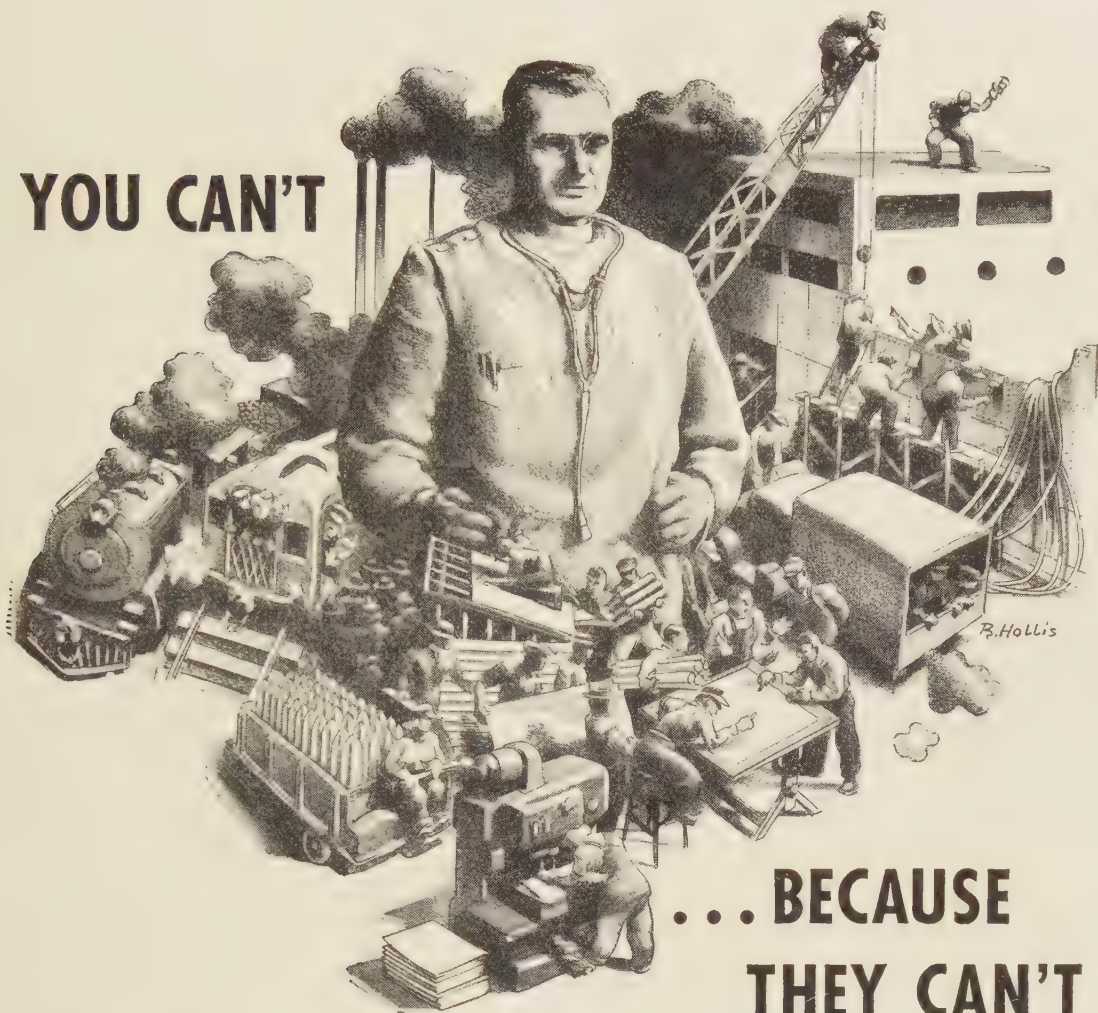
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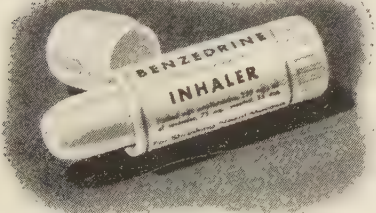
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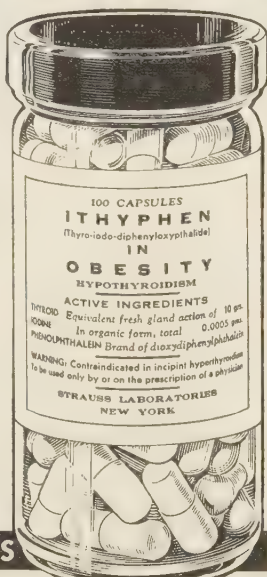
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Blind Physiotherapists

Training in massage is a fruitful suggestion for a possible profession for those blinded in the war. In London a school of massage for blind men and women was established by the National Institute for the Blind in 1915 and is now to be enlarged, (*Brit. Med. Jour.*, Dec. 11, 1943). It is as yet the only training center in the world exclusively for sightless physiotherapists. The school's policy of maintaining a high degree of efficiency together with a curriculum adjusted to advancing technique has established the blind masseur as second to none in the profession. The possibility of such training in this country is well worth consideration, not only for blinded men and women of this war but as a training opening for other young blind people of ability.

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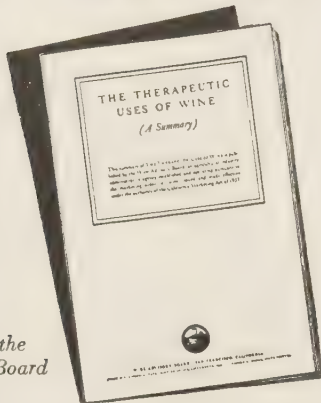
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THE CONTENTS INCLUDE: Sections on the actions of wine on the gastro-intestinal system, the cardio-vascular system, the kidneys and urinary passages, the nervous system and the muscles, and the respiratory system. The uses of wine in diabetes mellitus, in acute infectious diseases and in treatment of the aged and the convalescent. The value of wine as a vehicle for medication. The contraindications to the use of wine. And an extensive bibliography for those who may wish to pursue the subject further.

This review results from a study supported by the Wine Advisory Board, an agricultural industry administrative agency established under the California Marketing Act, and has been sponsored by the Society of Medical Friends of Wine.

A copy of *The Therapeutic Uses of Wine* is available on request to any member of the medical profession. Write for it, to the Wine Advisory Board, 85 Second Street, San Francisco 5, California.



Sulfonamides in Nasal and Sinus Infection

(Continued from page 86)

A suspension of sulfathiazole in an aqueous solution of paredrine hydrobromide was found to be successful in reducing nasal congestion and in decreasing or eliminating discharge. No untoward effects of any kind were observed. Its use was believed to have shortened the course of infection for many patients and averted sequelæ to colds.

Experiments were undertaken in mice with sprays of, 1, an aqueous suspension of microcrystalline sulfathiazole and 2, an aqueous solution of sodium sulfathiazole. The only change observed in the lungs following inhalation of the *suspension* was mild hyperemia. But the mice exposed to the sodium sulfathiazole *solution*, under similar conditions, "died within a few hours" and their lungs showed gross evidences of an extreme hyperemia."

The vasoconstrictor dl-desoxyephedrine hydrochloride combined with solution sodium sulfathiazole is available for use in the nose and paranasal sinuses. This vasoconstrictor has an action on man and animals similar to that of amphetamine sulfate. German authors say it is not habit forming, still it has been placed under the German narcotic law with a warning to physicians to exercise caution when employing it.

Fabricant sums up the value of solutions of sodium sulfathiazole as follows: "The fact that alkaline preparations of sodium sulfathiazole solutions injure the mucous membrane is sufficient to indict it on that score. Furthermore, the destruction of cilia—and consequently the impairment of ciliary function—together with its deviation from a physiological nasal pH, as well as the disorganization of the olfactory epithelium

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which such preparations establish, plus the production of bronchopneumonia in laboratory animals, cannot justify the indiscriminate selection of sodium sulfathiazole preparations for use in the human nose."

In conclusion, Fabricant notes that while nasal vasoconstrictors are probably the most important single group of drugs available to the rhinologist, it is difficult to interpret the benefits obtained from a combined intranasal medication. When the combination includes the sulfonamides, their possible degree of toxicity must be thoroughly understood. Unintelligent and promiscuous usage locally of sulfonamide preparations, in addition to other hazards may develop a sulfa resistant state in the patient. Evidence to date indicates caution in the use of some of the sulfonamide preparations locally in the nose and sinuses; others are employed successfully in a limited number of directions and have an important place in contemporary rhinology. The near future may see the introduction of sulfonamide preparations, locally nontoxic, and compatible with the needs of nasal physiology. They should, however, still be considered only as important adjuncts to treatment.

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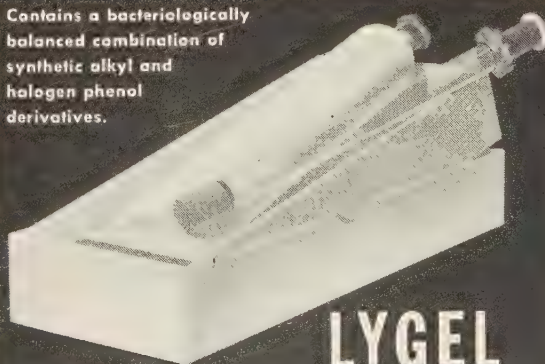
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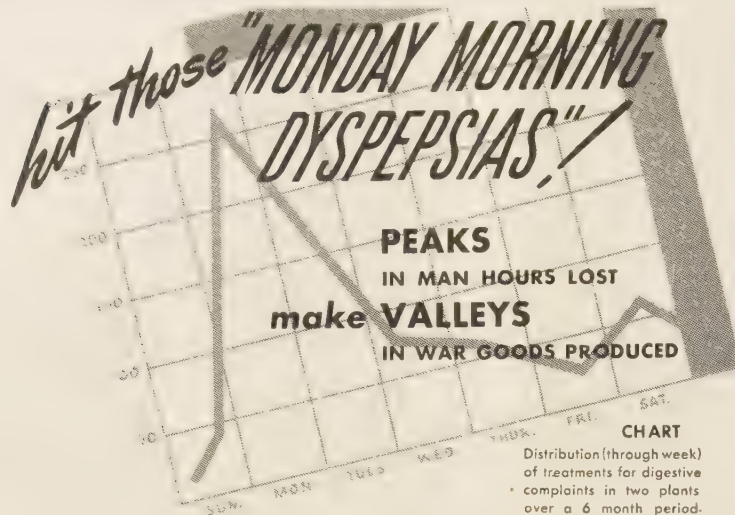


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Psychiatric Rehabilitation of Ex-Service Men

Dr. Thomas A. C. Rennie, assistant professor of psychiatry at Cornell University Medical College, at a meeting of workers in the social service field, held on January 12th, said that in New York City ninety thousand men had been rejected by the armed services for psychiatric disabilities and an additional twenty thousand had been discharged for the same reason. "The problem in the country at large is staggering and is steadily growing," Dr. Rennie said. "With seventy thousand men being discharged each month from the armed services, one-third, or approximately twenty-five thousand are likely to be psychiatric disabilities." The results obtained from psychiatric treatment of such men are encouraging, he continued, and "indicate the need for establishment of psychiatric centers or clinics for men of this group where they may secure help."

Reporting on the work of the Rehabilitation Clinic of the New York Hospital, which opened on August 19, 1943, Dr. Rennie said that one hundred and fifty men, most of them discharged from the armed services, had been registered. They represent a cross-section of psychiatric disorders ranging from acute schizophrenia and depressions to psychoneuroses. The majority fall into the later group, anxiety neuroses being most common.

"The results of treatment have been most encouraging. More than half the men showing definite improvement, while many have recovered entirely. The treatment period is far briefer than that required for the ordinary civilian neurotic, and with help, many of these acute conditions subside rapidly," Dr. Rennie said, and added that there have been "definite indications that psychiatric treatment is being planned along extensive lines."

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Aviation Hazard

With war flying reaching constantly higher altitudes, D. H. LeMessurier (*Med. Jour. Australia*, Aug. 14, 1943) warns against the dangers of anoxia and carbon monoxide. Symptoms of insufficient oxygen should be taught to all flyers, since the sufferer from anoxia may be unaware of a condition that can be detected by an observer who still has a full oxygen supply. The brain is affected first and the growing defective judgment, inaccuracy, dimming of alertness, may be suspected from pugnacity, hilarity or sleepiness of the victim before unconsciousness supervenes. Training should stress the use of the altimeter, and taking no chances on subjective symptoms before using oxygen.

Visual symptoms are slow to develop in the daytime, but at night, even a slight degree of oxygen lack at ten thousand feet impairs "dark adaptation". Hearing loss, though only slight, may cause small changes in engine rate to go undetected. Muscles and nerves are imperceptibly, but increasingly affected until the subject may "pass out" without being aware of his danger. Air sickness is a warning. Respiration tends to become of the Cheyne-Stokes type; a rapid pulse is a feature at this stage. Prolonged exposure to slight oxygen lack impairs efficiency and leads to unnecessary discomfort and fatigue.

The toxicity of carbon monoxide, even in minute quantities rises with the altitude. In addition to physiological reactions there is an effect on the sino-aortic nerve endings which prevents increased ventilation so that fainting and unconsciousness may occur with even less warning than that produced by oxygen lack.

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Diet of Ancient Egypt

The basic seven, important in Egyptian numerology, was nevertheless overlooked in her ancient diet. This diet (*Nutrition Reviews*, Sept. 1943) is of special interest because numerous skeletal remains of its population are available, and from a study of these skeletons we know that most of the diseases which beset us today were known at that time. Tuberculous bones, Pott's disease, periostitis, osteomyelitis, numerous fractures and dislocations, especially skull injuries, achondroplasia, and many congenital deformities were common. The incidence of dental caries in early Egypt was

ten percent which comes close to the best record for dental health, which is shown by the Eskimos, among whom caries occurs in only six percent of the population, the lowest in any human group.

The longevity record for Egyptians could not have been too bad, since the figures indicate that in Roman Egypt 73.7 percent of the population was dead by forty years of age, while in Austria in the nineteenth century the equivalent figure was 66.2 percent. Curiously enough, scurvy and rickets were uncommon.

This is of special interest if we consider the diet of those people. According to Sir Armand Ruffer, bread

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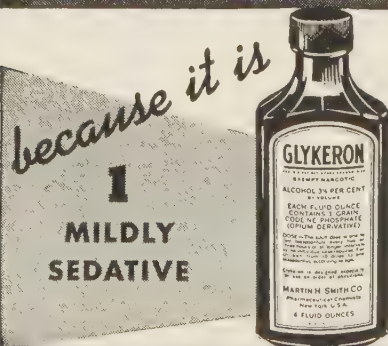
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and vegetable oil were the staples of the bulk of the population. Egypt was known as the bread-eating nation. Barley and wheat flour were used. Baking was a large industry, but home baking was also common. Confectionery and bread of fine flour were available as was also a bread from ricinus, a common remedy against diarrhea. The army ration was four pounds of bread a day. Some meat was also consumed, but because the cow and bull were sacred they were killed only for sacrifice. Sheep and pigs were also sacred and not eaten. Hyenas, on the other hand, were fattened for the table. Little milk was consumed and it was used mainly as a sacrifice and occasionally as sacred medicine. The most common meat was that of geese and a few other fowls, but even that was eaten only on rare occasions. Fish was consumed by the common people but not by priests, and was regarded as polluting food.

Some fruit, such as figs, dates, and melons were occasionally eaten, but very few vegetables, among which can be cited the roots of the lotus and papyrus, beans, lentils, onions, and garlic. Asparagus and artichokes were considered rare delicacies for the rich.

Oil was extracted from a number of vegetables and was regarded like cotton in the trade and foreign importation of it was prohibited. Oil was made of linseed, pumpkins, castor beans, and olives and was used for cooking, lighting, as food, embalming, and for cosmetics.

The lack of green and yellow vegetables in the diet may account for the frequency of eye diseases in Egypt. Herodotus and others were impressed by the number of eye doctors there. Where their vitamin C came from is not clear.



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Symptoms of Vitamin B Deficiency

Clark and Prescott (*Brit. Med. Jour.*, Oct. 23, 1943) reported on seventeen cases of vitamin B deficiency associated with oral lesions and mental symptoms. All cases presented certain common features, poor diet or lack of appetite owing to mental or physical causes or

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a condition necessitating dieting, such as peptic ulcer and hypertension, or interfering with absorption, such as vomiting and typhoid. Many of the patients lived alone and did not bother with much cooking or, because of the home set up, subsisted largely on snacks and carbohydrate foods. Many did not eat meat or enough milk or cheese and a general preference for white bread was found. All showed some signs and symptoms of functional nervous disorders; all betrayed nicotinic acid deficiency (glossitis, depression or other mental symptoms), and nearly all showed one of the signs considered specific for riboflavin deficiency (angular stomatitis or cheilosis). Signs and symptoms of peripheral neuritis were present, however, in only four cases.

Treatment was supplemented by adequate doses of vitamin B and riboflavin, with instructions regarding vitamin rich diet and wheat germ or yeast preparations. This cleared up or improved the condition in all the patients studied. In two cases the cheilosis did not respond. Mental symptoms, however, cleared up under the therapy, without alteration of environment or special psychological treatment.



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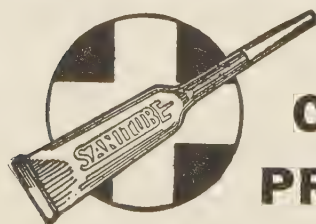
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Auditory Imperception

According to C. Worster-Drought (*Brit. Med. Jour.*, Aug. 28, 1943) children suffering from auditory imperception are able to hear sounds, but fail to appreciate the significance of spoken words. This condition is difficult to recognize since the children may have some degree of deafness, be mute, or cling to a language of their own, unintelligible to outsiders. Ordinary tests fail; only those which require that the subject understand the meaning of the sound can be used. Such children frequently are normal mentally, if brought up in good environment and treated with sympathetic understanding by parents and teachers. If neglected, they may appear imbecile. Cases are on record where speech was not acquired before the age of twelve. Auditory imperception, the author states, is rare in severe form, but minor degrees are common. It seems to appear more often in boys than in girls, and there is a familial factor, though no evidence of how it is transmitted. The cause is not known. Treatment depends on early recognition of the defect, and the general aim is "socialization" of the individual, planning an education to in-

clude normal relationship with fellow students and to qualify the individual for occupation. Articulation training by sound and touch, and the teaching of lip-reading in the way deaf-mutes are taught, may be of use, but teaching in classes for the deaf is to be avoided.

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